Usenet Newsgroup Archive: rec.radio.amateur.space

2012

These Usenet messages were preserved as a plain-text archive. This PDF was generated by Digital Library of Amateur Radio & Communications from the source text file in 2026.

Date span: 2012-01-01 through 2012-12-31

Source text: rec.radio.amateur.space.txt

Source item: https://archive.org/details/usenet-rec

Messages included in this PDF: 177

Messages are presented chronologically by archived date.

Binary or encoded payloads are not printed as blocks of encoded text; a placeholder appears where such material was detected. The original source text is unchanged.

1. Crossposting Permitted to rec.radio.amateur.moderated

Newsgroup: rec.radio.amateur.space
Date: 2012-01-01 07:00:02 UTC
From: rram@panix.com
Message-ID: <radio/ham-radio/moderated/crossposting-1-1325401201@panix.com>
Source record: 151
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space,rec.radio.info

```
Posted-By: auto-faq 3.3.2 beta (PGPMoose V2.0, Perl 5.005)
Archive-name: radio/ham-radio/moderated/crossposting
Revision: 1.2 2011/11/02 04:08:53
Posting-Frequency: posted monthly
URL: http://www.panix.com/~rram/usenet/rram/index.html

Changes followed by "|".

After a 30-day public discussion and feedback period to gauge reader
opinions in March of 2009:

http://groups.google.com/group/rec.radio.amateur.moderated/browse_thread/thread/d7d337db35
f23326

the rec.radio.amateur.moderated Moderation Team had decided to consider |
amending its charter, and permit limited simultaneous crossposting to
rec.radio.amateur.moderated and one other unmoderated
amateur-radio-related discussion newsgroup. After a successful trial |
period (90 days, through early July 2009), we decided to adopt this |
change permanently. |

Approved rec.radio.amateur.* newsgroups are those that are currently
listed in the latest version of the "List of Big Eight Newsgroups" which
is crossposted monthly to news.announce.newgroups, news.groups, and
news.lists.misc.

Approved alt.radio.amateur.* and alt.ham-radio.* newsgroups are those
that have been created consistent with the suggestions in "So You Want
to Create an Alt Newsgroup" at:

http://www.faqs.org/faqs/alt-creation-guide/

Approved regional hierarchy newsgroups are those that contain either
"radio.amateur" or "ham-radio" in their names, including
uk.radio.amateur and aus.radio.amateur.misc.

We will make every reasonable effort to keep our list of approved
newsgroups up-to-date. In case we have overlooked any, and a submission
is rejected in error as a result, the rejected submitter can E-mail us
at our administrative contact address (in the signature at the bottom of
this article, and the default Reply-To for the rejection message)
requesting that it be added, and that the article be approved. We may
still choose to reject articles crossposted to any alt.* newsgroup with
an inappropriate name, including obscene language, embedded
name-calling, or encouragement of unlawful conduct.
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Please direct any comments, questions, or criticisms to
rec-radio-amateur-moderated-request@panix.com.

2. ANS-001 AMSAT News Service Weekly Bulletins

Newsgroup: rec.radio.amateur.space
Date: 2012-01-01 16:33:22 UTC
From: JoAnne Maenpaa <k9jkm@comcast.net>
Message-ID: <000601ccc8a3$0e280530$2a780f90$@net>
Source record: 152
Cross-posted to: rec.radio.amateur.space,rec.radio.info

AMSAT NEWS SERVICE
ANS-001

ANS is a free, weekly, news and information service of AMSAT North America, The Radio Amateur Satellite Corporation. ANS reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in designing, building, launching and communicating through analog and digital Amateur Radio satellites.

Please send any amateur satellite news or reports to:
ans-editor@amsat.org

In this edition:

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* Chicken Little Contest Update
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SB SAT @ AMSAT $ANS-001.01
ANS-001 AMSAT News Service Weekly Bulletins

AMSAT News Service Bulletin 001.01
>From AMSAT HQ SILVER SPRING, MD.
January, 1, 2012
To All RADIO AMATEURS
BID: $ANS-001.01

A Note About the New AMSAT News Service Format

The ANS news bulletins have traditionally been sent out using a packet header format on each item. In the year 2012 we are no longer sure how many VHF-UHF PBBS systems remain active that are re-distributing ANS bulletins via RF-based AX.25. Perhaps the packet header is no longer a requirement for each individual news item.

ANS plans to continue to distribute the bulletins in our traditional plain-ascii format so this is not changing. Previous inquiries have indicated a very strong preference for the plain-ascii format.

In this bulletin you will observe we have preserved the e-mail style of plain ascii text, 70 character lines. We preserved packet compatibility by placing a single packet-header at the top of the news and a single /EX at the end of the entire news. If this still goes out by packet SB SAT @ AMSAT $ANS-001.01 should still be able to be processed, received, and read.

Happy New Year from the AMSAT News Service crew!

ARISSat-1 altitude is rapidly decreasing

On Tuesday, 27 Dec 2011, ARISSat-1 was losing about 4.1 km (~2.5 miles) a day in altitude, by Friday 30 Dec 2011 the decay was 5.9 km (3.6 miles)
per day. This rate will continue to increase over the next days and ultimately result in the satellite burning up in the atmosphere.

Telemetry reports haven't shown a large increase in temperatures yet, please collect and report these values during each illumination period. There have been a number of people that continue to update their calculations on when the satellite will re-enter. Dates range from 30 Dec to 16 Jan.

The fall rate dh/dt is increasing dramatically. Be sure to do daily updates of the ARISSat-1/RadioSkaf-B Keps from Celestrak.com. The ARISSat-1 orbit changes daily while the satellite continues to lose altitude.

Roland, PY4ZBZ from Brazil has updated graphs of height and fall rate on his Web site: http://www.qsl.net/py4zbz/arissat.htm#r

Now that ARISSat-1 is in its last days, the Chicken Little Contest web site has been updated to include the individual submissions in each category nearest its likely reentry time. See:

http://www.amsat.org/amsat-new/ARISSat/ARISSatContest

You can see how you are doing compared to the competition! It appears that the submissions are sufficiently spread out that we will be able to determine unique winners in each category. However, you can help with this by keeping the telemetry submissions coming. Space Command does not maintain precise Tracking and Impact Prediction (TIP) for minor spacecraft.

A small satellite is considered to have reentered when three consecutive tracking stations fail to acquire it, which leaves a considerable window.

While the formal last telemetry contest is only open to submission through the telemetry programs, keep listening and note the time and place where you hear it last. After it has been confirmed to have reentered, the last reception including voice and CW, may help narrow that window unless transmissions cease significantly before reentry.

[ANS thanks Gould, WA4SXM and Alan, WA4SCA for this information]

OSCAR-11 REPORT 29 December 2011

This report covers the period from 01 September to 28 December 2011. The satellite has continued to operate in a very predictable way since the last report, and no changes have been observed. During this time the satellite has been heard reliably during its ten-day transmission periods. Excellent signals have been reported from stations located around the world, and good copy obtained from decoded telemetry frames.

The easiest way to check whether OSCAR-11 is operational is to look at the General Satellite Status website http://oscar.dcarr.org/index.php. You can also calculate the operating schedule from the last switch-off time, which was 28 December 2011 at 15:00 UTC (approx), using 10.35 days off followed by 10.35 days on.

Reception reports have been received from Gustavo LW2DTZ, Bob KI0G, Rolf HB9TSO and Francesco IT9JRU. Many thanks to all and those who posted to the status website.

The satellite is currently in eclipse during all evening passes over the UK, resulting in lower signal strengths at these times. Owing to the gradual precession of the orbit, the season for eclipses of the evening passes is longer this year compared with the winter last year.

The on-board clock continues to gain, 28 seconds during the current reporting period, and 112 seconds since regular transmissions were resumed at the end of August 2010. There is however a large accumulated error of 308.54303 days slow. This was caused mainly by the clock stopping during eclipses, when there was also an unknown drain on the power supply. The units of the least significant digit correspond approximately to seconds (0.86 seconds actually).

The VHF beacon frequency is 145.826 MHz. AFSK FM ASCII Telemetry. The satellite is operating in the default mode, with a cycle time of 20.7 days. 10.35 days on followed by
10.35 days off.

At the present time, while OSCAR-11 is operating in a predictable way, I no longer need direct reports or files by e-mail. However, could all listeners continue to enter their reports on the general satellite status website. This is a very convenient and easy to use facility, which shows the current status of all the amateur satellites, and is of use to everyone. Reports around the expected times of switch-on and switch-off are of special interest, especially for times 12:00 - 18:00

and 22:00 - 07:00 UTC, when the satellite is out-of-range in the UK. The URL is http://oscar.dcarr.org/index.php

A longer version of this report report is available on my website, and new listeners to OSCAR-11 should read this for further information. The URL is www.g3cwv.co.uk/oscar11.htm . This page contains a links to the longer report, a short audio clip to help you identify the satellite and a file of the last telemetry received. The website also contains an archive of news & telemetry data which is updated from time to time, and details about using a soundcard or hardware demodulators for data capture. There is also software for capturing data, and decoding ASCII telemetry.

If you place this bulletin on a terrestrial packet network, please use the bulletin identifier $BID:U2RPT157.CWV, to prevent duplication.

[ANS thanks Clive G3CWV for the above information]

Highlights of ARISS International Delegates Annual Meeting

The ARISS International Delegates Annual Meeting was held at the NASA Johnson Space Center in Houston, TX on October 28-29, 2011.

The ARISS Team meeting was opened with a welcome by Susan White, lead of Johnson Space Center Education Office. The main objective of the NASA Education Office is to promote STEM (science, techno- logy, engin- eering, and math) activities. Susan said NASA greatly appreciates the efforts the ARISS team puts into promoting STEM, and applauds the fine educational outcomes garnered by ARISS. She said NASA is focusing heavily on two new things for Fiscal Year 2012 (October 1, 2011 to September 30, 2012):

+ Continue to make the very best use of its resources, including resource help from outside of NASA -- such as from ARISS.

+ The other focus is professional development promoting the STEM initiative.

ARISS Delegates submitted their status report for their region prior to the meeting. These have been posted at: http://www.amsat.org/amsat/ariss/Meetings/2011_Houston/Presentations/

Highlights of the presentations include:

+ ARISS education. ARISS will continue with its support of the School Contacts.

+ Summary of the ARISSat-1/KEDR mission.

+ Hardware proposal regarding the installation of a new Kenwood D710 radio in the Columbus module.

+ Hardware proposal for new power supply for ISS-Ham operations
in the Columbus module.

+ Ongoing work with ARISS-Europe, AMSAT-Italy, ESA, and Kayser-Italia
for implementation of the HAMTV - Digital ATV with S-band downlink
from the Columbus Module. S-band ATV equipment would be required at
schools for use in video ARISS contacts.

More details about the meeting along with photographs of the meeting are
included in the next AMSAT Journal which will be mailed to all AMSAT
members.

[ANS thanks ARISS for the above information]

NO-44 PCSAT Recovery Attempt in Progress

NO-44 PCSAT-1 has remained semi-operational in sunlight since its
battery had failed years ago. The satellite shuts down due to low
power from the solar cells in eclipse. On many passes a poor sun
angle provides only enough power for it to digipeat only 1 or 2 pack-
ets via 145.825 MHz AX.25. A few times a year PCSAT's orbit has it
in 24-hour sunlight for a few days. One of these full-sun periods
is occuring now.

Bob Bruninga, WB4APR, control station for the US Naval Academy Sat-
ellite Lab, the "owners" of PCSAT, is attempting to recover PCSAT by
uplinking commands. Due to the poor sun angle on the solar cells just
one single packet from a user other than the control station during a
pass will easily kill that pass's chance of recovery.

Bob says they only get a few packet chances per pass for recovery. He
needs for the stations with beacons on 145.825 MHz to please turn off
your beacon - it competes with the slim power budget that the control
station is attempting to utilize.

This past week, European control station Mike Rupprecht, DK3WN man-
aged to recover PCSAT for a short period before low voltage reset
the satellite again.

Please do not attempt to digipeat via PCSAT on 145.825 MHz while the
satellite recovery effort is underway. Bob says it will take the right
sun angle, at the right time to ensure success.

It is OK for ground stations to access the ARISS packet system on the
ISS, also on 145.825 MHz when PCSAT is not in range.

[ANS thanks Bob Bruninga, WB4APR for the above information]

FO-29 Recovery and Testing Continues

The FO-29 Command Team reported that their December 23 test operation
was successful. They were able to gain control of the satellite and

copy its telemetry beacon while it was over Japan.

FO-29 stopped operating when it entered eclipse. An example of the telemetry copied during testing has been posted as a sound file at: http://www.ne.jp/asahi/m-arai/gkz/sound/FO29-111223142200-142544z.mp3

A tentative FO-29 operation schedule for early January, 2012 is:

Jan 1 04:43 UTC
Jan 3 04:37 UTC
Jan 4 05:28 UTC

The transponder is expected to operate until eclipse. Stations in East Asia, Australia/New Zealand and southern South America will be able to attempt to use FO-29.

[ANS thanks Mineo Wakita, JE9PEL and Masa Arai, JN1GKZ for the above information]

University of Rome UniCubeSat GG Qualified for Vega Maiden Flight

The AMSAT-UK web carried the news that a seventh University Cubesat has passed its Final Acceptance Review at ESA and has been added to the manifest of the maiden Vega Launch.

The January 2012 inaugural launch of the ESA Vega rocket from the ESA spaceport at Kourou in the Caribbean will carry the amateur radio microsatellite ALMASat-1 and now CubeSats. The orbit is planned for 1450 by 300 km at an inclination of 69.5 degrees.

There were slots for up to nine CubeSats on the Vega launch. This week it was announced that UniCubeSat GG (Universit&#65533; di Roma &#65533;La Sapienza&#65533;, Italy) will be the seventh cubesat aboard this launch.

The UNICubeSat mission goal is the in situ measurement of atmospheric density, which is made possible by the low perigee altitude of the VEGA Maiden flight orbit. All of the UNICubeSat key components, such as solar arrays, batteries, communications and on board data handling are developed on the heritage of the four UNISAT satellites, designed, built and launched by the GAUSS team at the Scuola di Ingegneria Aerospaziale in the last decade. The SPIV ground station, located in Roma, will be the main ground station for the UNICubeSat mission.

The previously announced six cubesats on the maiden Vega Launch included:

+ Xatcobeo (collaboration of the University of Vigo and INTA, Spain)
+ Robusta (University of Montpellier 2, France)
+ E-St@r (Politecnico di Torino, Italy)
+ Goliat (University of Bucharest, Romania)
+ PW-Sat (Warsaw University of Technology, Poland)

+ MaSat-1 (Budapest University of Technology & Economics, Hungary)

As well as the CubeSats Vega will also carry the Amateur Radio micro-satellite ALMASat-1.

The full story can be read on-line: http://tinyurl.com/csgkqwz (www.uk.amsat.org)

ESA CubeSats delivered for first Vega flight news web page:
http://www.esa.int/esaMI/Education/SEM3L0WWVUG_0.html

ESA Education - CubeSats
http://www.esa.int/esaMI/Education/SEM3N03MDAF_0.html

A picture of ALMASat-1 and the six CubeSats is posted at AMSAT-UK:
http://tinyurl.com/c8o73zw (uk.amsat.org)

The IARU amateur satellite frequency coordination pages hosted by AMAT-UK list the frequencies of the amateur radio satellites:
http://www.amsat.org.uk/iaru/

Mineo Wakita, JE9PEL provides complete coverage of the Vega launch on his 'ESA CubeSats Update' web pages. You'll find an overview of each of the satellite missions, frequencies, modulation/protocols, and links to the developers home web pages posted at:
http://www.ne.jp/asahi/hamradio/je9pel/esa9cubf.htm

[ANS thanks ESA, AMSAT-UK, for the above information]

The DIY Magic of Amateur Radio released

A new promotional video has been released to attract Hackers, Makers and Innovators to ham radio.

The video features well known hacker and maker Diana Eng KC2UHB along with Ham Nation's Bob Heil K9EID and ISS Astronaut Doug Wheelock KF5BOC. It follows some of the innovative, imaginative and fun ways "hams" use radio technology in new and creative ways and points out that amateur radio clubs are similar to hacker groups.

Watch The DIY Magic of Amateur Radio in HD
"http://www.youtube.com/embed/vlDwVhx7miQ?feature&#65533;ayer_embedded"
frameborder&#65533;" allowfullscreen></iframe>

[ANS thanks ARRL for the above information]

ARISS Status

1. Upcoming School Contact

An Amateur Radio on the International Space Station (ARISS) contact has been scheduled for the Historical Museum of Gdansk in Gdansk,

Poland on Saturday, December 31 at 14:04 UTC. This year the museum celebrates the 400th anniversary of the birth of astronomer Johannes Hevelius. On display are exhibitions which represent Hevelius' achievements and research instruments. Other presentations showcase modern space exploration. Students from several Gdansk schools will participate in the ARISS contact.

2. Rome Contact Successful

On Monday, December 19, students from Teodoro Mommsen Middle School in Rome, Italy spoke with Astronaut Dan Burbank, KC5ZSX via an Amateur Radio on the International Space Station (ARISS) contact. Telebridge station LU1CGB in Buenos Aires, Argentina handled the radio link. Nearly 80 students attended the event and listened as Burbank fielded sixteen questions about living in a micro-gravity environment. The school, located in the "Appio-Latino" district in the south of Rome, has an enrollment of 800 students, ages 11 - 13. To view contact video, see: http://www.livestream.com/amsat_italia/video?clipId=a_47be5d99-fe7a-4b
1a-967c-e58fabbb97aa

3. ARISS Sets New Events Record

The ARISS contact held with Kobe, Japan was number 121 for 2011 and equals the most number of events done in a calendar year (set in 2009). The Teodoro Mommsen Middle School contact held on Monday, December 19 was number 122 and set a new record for the number of events conducted in a single calendar year.

4. ARISS International Teleconference Held

The monthly ARISS International Team teleconference was held on Tuesday, December 20. It was announced that Rosalie White will step down as the U.S. representative and chairman of the ARISS-International Educational Outreach and School Selection Committee. She will be replaced by Frank Bauer. The ARISS status on filing with the ITU (International Telecommunication Union) was given and an update on the HamTV project, which may include a video beacon, was also provided. Minutes have been posted. See: http://ariss.rac.ca/arisstel2011-12-20.htm

5. Amateur Radio Newsline on ARISS

Amateur Radio Newsline posted a few items related to ARISS in its December 23 report #1793 under the heading "Ham Radio in Space." The first story is about new crew members Don Pettit, KD5MDT, Oleg Kononenko, RN3DX and Andre Kuipers, PI9ISS flying to the ISS this past week. The second story gives a new prediction of when ARISSat will re-enter Earth's atmosphere. "Three Astro-Hams Headed to the ISS" and "ARISSat-1 Mission May End December 31" may be viewed at: ftp://ftp.arnewsline.org/quincy/News/news.txt

6. ARRL QST Covers ARISS News

The American Radio Relay League (ARRL) January 2012 QST coverage of ARISS items are:

"It Seems to Us," written each month by CEO Dave Sumner, K1ZZ, is titled this month "The Year Ahead" and covers what's expected for 2012. Dave lists World Amateur Radio Day on April 18, 2012, when this year's theme will be "Amateur Radio Satellites: Celebrating 50 Years in Space." Dave says we'll celebrate the launch of the first OSCAR satellite that "was followed by an even greater thrill in 1983 when radio amateurs the world over spoke with Owen Garriott, W5LFL, as he orbited the Earth aboard STS-9."

The "Media Hits" column mentions the ARISS school, Holy Family Catholic School, in Grand Junction, CO. A good newspaper story ran in the Grand Junction Sentinel when reporters attended a demonstration put on by students of on-the-air amateur radio moonbounce operations.

The "In Brief" column listed the crew members, including Dan Burbank, KC5ZSX, who had joined the crew on the ISS.

[ANS thanks Carol, KB3LKI, for the above information]

/EX

In addition to regular membership, AMSAT offers membership in the President's Club. Members of the President's Club, as sustaining donors to AMSAT Project Funds, will be eligible to receive additional benefits. Application forms are available from the AMSAT Office.

It has been another year of information and news gathering for us at ANS. Please keep the timely information you provide coming on a regular basis. It is with great hope for the upcoming year in AMSAT that we at ANS, Joanne, Lee & Dee, wish you all a healthy and safe New Year.

73,
This week's ANS Editor,
Dee Interdonato, NB2F

3. Where are 2 line elements?

Newsgroup: rec.radio.amateur.space
Date: 2012-01-02 08:29:41 UTC
From: 202@nic.invalid
Message-ID: <4f016a2f.189078@news.nic.fi>
Source record: 153

Returned here after being QRT for over 10 years and noticed 2 line element sets for ham satellites
seem to be missing? I assume there are still some ham satellites? Maybe not the easy-to-work mode A
satellites in low orbit, though...

73 Mika

4. Re: Where are 2 line elements?

Newsgroup: rec.radio.amateur.space
Date: 2012-01-02 09:55:31 UTC
From: Rob <nomail@example.com>
Message-ID: <slrnjg2voj.f42.nomail@xs8.xs4all.nl>
Source record: 154

Mika <202@nic.invalid> wrote:
>
> Returned here after being QRT for over 10 years and noticed 2 line element sets for ham satellites
> seem to be missing? I assume there are still some ham satellites? Maybe not the easy-to-work mode A
> satellites in low orbit, though...

Missing from where?
You can still get them at www.celestrak.com

There have been some problems because some government people thought
those elements would be abused by "the terrorists" and it seemed like
they would no longer be available, but apparently something was worked
out to still make them available to us.

5. Re: Where are 2 line elements?

Newsgroup: rec.radio.amateur.space
Date: 2012-01-02 16:13:57 UTC
From: Patty Winter <patty1@wintertime.com>
Message-ID: <4f01d7c5$0$1678$742ec2ed@news.sonic.net>
Source record: 155

Mika, if you've been away for that long, you may not realize
that heavens-above.com offers ready-to-use pass information
for ham satellites as well as other types.

73,
Patty N6BIS

6. Re: Where are 2 line elements?

Newsgroup: rec.radio.amateur.space
Date: 2012-01-03 00:32:57 UTC
From: Alan WA4SCA <WA4SCA@YAHOO.COM>
Message-ID: <31j4g7hft4ea64os5ha9klrb51po061ufq@4ax.com>
Source record: 156

Mika,

Keps are still pretty much where they were, but are available in many more places now. Go to WWW.AMSAT.ORG and look around on the left side of the page. There is also good information on the status of particular satellites. You will find that many things have changed in a decade, including the type and number of satellites flying and planned.

Welcome back!

--
Alan
WA4SCA

7. Re: Where are 2 line elements?

Newsgroup: rec.radio.amateur.space
Date: 2012-01-03 21:01:23 UTC
From: 202@nic.invalid
Message-ID: <4f036bf8.31521653@news.nic.fi>
Source record: 157

On Mon, 02 Jan 2012 18:32:57 -0600, Alan WA4SCA <WA4SCA@YAHOO.COM> wrote:

>Mika,
>
>Keps are still pretty much where they were, but are available in many
>more places now. Go to WWW.AMSAT.ORG and look around on the left side
>of the page. There is also good information on the status of
>particular satellites. You will find that many things have changed in
>a decade, including the type and number of satellites flying and
>planned.
>
>Welcome back!
>
>
>
>--
>Alan
>WA4SCA

Thanks to all of you for answers. Have now bookmarked many good www sites.

Back in the 1990's I used to get my 2 line element updates by 2m VHF packet radio. 1200 baud if I
remember correctly. World has changed a lot since then ;)

73 Mika OH1NZQ

8. Re: Where are 2 line elements?

Newsgroup: rec.radio.amateur.space
Date: 2012-01-03 21:32:10 UTC
From: Rob <nomail@example.com>
Message-ID: <slrnjg6suq.c37.nomail@xs8.xs4all.nl>
Source record: 158

Mika <202@nic.invalid> wrote:
> Thanks to all of you for answers. Have now bookmarked many good www sites.
>
> Back in the 1990's I used to get my 2 line element updates by 2m VHF packet radio. 1200 baud if I
> remember correctly. World has changed a lot since then ;)

Maybe you have left packet (like most of us), but the weekly kepler
elements are still being distributed there...

9. Weekly Highlights of Solar and Geomagnetic Activity, 26 December - 01 January 2012

Newsgroup: rec.radio.amateur.space
Date: 2012-01-04 02:30:06 UTC
From: SWPC.Webmaster@noaa.gov
Message-ID: <20120104023001.C5B3B33C93@panix2.panix.com>
Source record: 159
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.dx,rec.radio.amateur.space,rec.radio.info

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:Product: Weekly Highlights and Forecasts
:Issued: 2012 Jan 03 2308 UTC
# Prepared by the US Dept. of Commerce, NOAA, Space Weather Prediction Center
# Product description and SWPC contact on the Web
# http://www.swpc.noaa.gov/weekly.html
#
# Weekly Highlights and Forecasts
#
Highlights of Solar and Geomagnetic Activity
26 December - 01 January 2012

Solar activity was at low to moderate levels. Activity was moderate
on 26 December due to M-class flares from Region 1387 (S21, L = 227,
class/area Dki/290 on 27 December), the largest being a M2/Sf event
at 26/2030 UTC. Activity decreased to low levels during 27 - 28
December with most of the frequent C-class flares from Regions 1387
and 1389 (S23, L = 087, class/area Ekc/500 on 30 December). Activity
returned to moderate levels during 29 - 31 December due to M-class
flares from Region 1389. Activity decreased to low levels on 01
January with most of the flare activity from Region 1389.

No proton events were observed at geosynchronous orbit during the
period. However, a greater than 10 MeV proton flux enhancement
occurred during 25 - 26 December (peak flux 3 pfu at 26/0135 UTC)
associated with a M4/1n flare at 25/1816 UTC from Region 1387.

The greater than 2 MeV electron flux at geosynchronous orbit was at
normal levels.

The geomagnetic field was at quiet levels during 26 - 28 December.
Activity increased to quiet to unsettled levels on 29 December due
to weak CME passages associated with filament eruptions observed on
25 and 26 December. Field activity decreased to mostly quiet levels
during 31 December - 01 January.

Forecast of Solar and Geomagnetic Activity
04 January - 30 January 2012

Solar activity is expected to be at low levels with a slight chance
for isolated M-class activity.

No proton events are expected at geosynchronous orbit.
```

The greater than 2 MeV electron flux at geosynchronous orbit is expected to be at normal to moderate levels during 04 - 07 January. Normal flux levels are expected during 08 - 30 January.

The geomagnetic field is expected to be at quiet to unsettled levels during 04 - 06 January due to recurrent coronal hole high-speed stream effects. Predominantly quiet conditions are expected during 07 - 30 January.

10. Radio Meteor Obs. Bull. December 2011 Geminids Ursids

Newsgroup: rec.radio.amateur.space
Date: 2012-01-07 15:44:41 UTC
From: Chris Steyaert <observations@rmob.org>
Message-ID: <c1qgg7dl5223u38kjnsph2ln5i4lcbmvik@4ax.com>
Source record: 160
Cross-posted to: rec.radio.amateur.space,sci.astro.amateur

Radio Meteor Observation Bulletin No. 221 of December 2011 (104 K) is available now as

http://www.rmob.org/rmobtext/rmob1112.txt

More information and the visual presentation of the hourly forward scatter counts can be found on

http://www.rmob.org

Chris

11. Re: Where are 2 line elements?

Newsgroup: rec.radio.amateur.space
Date: 2012-01-09 02:11:53 UTC
From: Glenn <aa5pk@hotmail.com>
Message-ID: <4f0a4cec$0$19341$bbae4d71@news.suddenlink.net>
Source record: 161

"Hils" <hils@saynotospam.net> wrote in message news:je81i8nfn1@speranza.aioe.org...
> One of the things I now wish I'd done is make some audio recordings of
> the convoys of RS series lighting up as they passed over Europe. Those
> sats were fun.

Some of these recordings may bring back memories" http://www.dd1us.de/spacesounds%202.html

12. Weekly Highlights of Solar and Geomagnetic Activity, 02 - 08 January 2012

Newsgroup: rec.radio.amateur.space
Date: 2012-01-10 22:30:06 UTC
From: SWPC.Webmaster@noaa.gov
Message-ID: <20120110223001.78C2333C52@panix2.panix.com>
Source record: 162
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.dx,rec.radio.amateur.space,rec.radio.shortwave,rec.radio.info

```
:Product: Weekly Highlights and Forecasts
:Issued: 2012 Jan 10 1730 UTC
# Prepared by the US Dept. of Commerce, NOAA, Space Weather Prediction Center
# Product description and SWPC contact on the Web
# http://www.swpc.noaa.gov/weekly.html
#
# Weekly Highlights and Forecasts
#
Highlights of Solar and Geomagnetic Activity
02 - 08 January 2012

Solar activity was low during most of the period with occasional
low-level C-class flares. A long-duration C2 x-ray event was
observed at 02/1524 UTC from just beyond the west limb. Associated
with this event was a greater than 10 MeV proton flux enhancement at
geosynchronous orbit (see below). Region 1390 (N08, L=122,
class/area Dao/210 on 06 January) produced a C1 x-ray event at
05/0722 UTC with an associated Type II radio signature (695 km/s
shock velocity). There were no Earth-directed CMEs observed during
the period.

No proton events were observed at geosynchronous orbit. However, a
greater than 10 MeV proton flux enhancement began late on 02 January
and ended late on 03 January (peak flux 1 pfu at 03/0550 UTC). The
enhancement was associated with the long-duration C2 x-ray event
mentioned above.

The greater than 2 MeV electron flux at geosynchronous orbit was at
normal levels.

Geomagnetic field activity was at quiet to unsettled levels during
the period. Brief minor storm periods occurred at high latitudes on
05 January associated with the onset of a coronal hole high-speed
stream (CH HSS).

Forecast of Solar and Geomagnetic Activity
11 January - 06 February 2012

Solar activity is expected to be at low levels during the period
with a slight chance for isolated M-class flare activity.

No proton events are expected at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit is
expected to be at normal levels during the period with a chance for
moderate levels during 14 - 16 January and again on 30 January - 01
```

February.

Geomagnetic field activity is expected to be at quiet levels during 10 January. An increase to quiet to unsettled levels is expected on 11 - 12 January and 16 January due to recurrent CH HSS effects. Quiet conditions are expected during 17 - 27 January. An increase to quiet to unsettled levels is expected on 28 - 29 January due to another CH HSS. Quiet levels are expected from 30 January - 06 February.

13. Re: Where are 2 line elements?

Newsgroup: rec.radio.amateur.space
Date: 2012-01-16 12:09:19 UTC
From: Scott <acepilotREMOVE@bloomer.net>
Message-ID: <BJ-dneYUPvvyjonSnZ2dnUVZ_i2dnZ2d@bright.net>
Source record: 163

On 1-15-2012 23:05, Hils wrote:

>
> Anyone fancy building a new mode A satellite (with a PSK
> engineering/science beacon)? :-)

I prefer mode K. Had a lot of fun with the old RS12 bird! :)

14. ANS-015 AMSAT News Service Weekly Bulletins

Newsgroup: rec.radio.amateur.space
Date: 2012-01-16 14:40:47 UTC
From: JoAnne Maenpaa <k9jkm@comcast.net>
Message-ID: <000c01ccd45c$d1b128f0$75137ad0$@net>
Source record: 164
Cross-posted to: rec.radio.amateur.space,rec.radio.info

AMSAT NEWS SERVICE
ANS-015

ANS is a free, weekly, news and information service of AMSAT North America, The Radio Amateur Satellite Corporation. ANS reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in designing, building, launching and communicating through analog and digital Amateur Radio satellites.

Please send any amateur satellite news or reports to:

ans-editor@amsat.org

In this edition:
* Cambodia DXpedition Possibly Active Via Satellite
* The CHIBIS-M research satellite to launch to the ISS/MKC
* Hams in Space Team Will Be Presenting at the North Kansas City Hamfest
* Push for Dedicated CubeSat Research Radio Spectrum
* Check Your Keps: ISS Performs Debris Avoidance Maneuver
* Sounds From Space Website Looking for Additional Sounds
* ARISS Status Report - 9 January 2012

SB SAT @ AMSAT $ANS-015.01
ANS-015 AMSAT News Service Weekly Bulletins

AMSAT News Service Bulletin 015.01
From AMSAT HQ SILVER SPRING, MD.
January 15, 2012
To All RADIO AMATEURS
BID: $ANS-015.01

Cambodia DXpedition Possibly Active Via Satellite

The DARC DX Newsletter DXNL 1762 dated January 11, 2012 reports that a Japanese group visiting Sihanoukville, Cambodia between January 14 to January 22 plans to operate on CW, SSB and digital modes on 160 M to 6 M and maybe alss via satellites.

The oerators are Masumi,JA3AVO (XU7AVO), Takeo,JA3BZO (XU7AEN), Tsuguya,JA3UJR (XU7UJR), Kunio,JA1CJA/JH3LSS (XU7CJA), Shozo,JA3HJI (XU7HJI pending) and Tatsuo,JA3ARJ (XU7ARJ pending). QSLs via home-calls.

[ANS thanks the DARC DX Newsletter DXNL 1762 for the above information]

The CHIBIS-M research satellite to launch to the ISS/MKC

On 25/26 January the CHIBIS-M satellite is scheduled to by launch to the ISS as part of the Progress mission.

This experiment provides a comprehensive study of physical processes in atmospheric lightning discharges. Delivery of the microsatellite in its working orbit at an altitude of 500 km will be done with a THC "Progress M-13M" after the completion of the flight of the truck in the station. According to the developers of the term of active existence of the spacecraft, "Chibis-M" will be at least one year.

It follows a long tradition of magnetosphere studies dating back to Sputnik-3, which (you will recall) nearly beat Van Allen to the detection of the eponymous Belts.

There will be a CW telemetry downlink of control/housekeeping data to the Kolibri-2000 standard on a frequency around 435 MHz.

It appears the plan is to raise the Progress orbit after undocking, followed by deploying the satellite.

Addtional information as available in Russian at the following URL:
http://chibis.cosmos.ru/index.php?id74

[ANS thanks Andy, G0SFJ, and Drew, KO4MA, for the above information]

Hams in Space Team Will Be Presenting at the North Kansas City Hamfest

The North Kansas City Hamfest is just around the corner on Saturday. January 21st!

One of the Guest Speakers at the Hamfest will be the Hams in Space Amateur Radio Satellite Team from Kansas City. Their presentation is scheduled for 10:00 AM.

Weather permitting; the team hopes to provide a live hands on demonstration of working an FM Amateur Radio Satellite in the parking lot of the event site. The time of the hands on demo will be based on the availability and timing of a satellite pass which will be determined closer to the event date.

January 21, 2012
Third Annual North Kansas City HAMFEST
One block east of North Oak & I-29
Hillside Christian Church
900 NE Vivian Road
Kansas City, Missouri
Watch the Hamfest Web Site for Time and Date Details
http://www.northkchamfest.com

For more information about Hams in Space, go to http://hamsinspace.com or http://kd0hkd.com/satellites

[ANS thanks Randy, KD0HKD, for the above information]

Push for Dedicated CubeSat Research Radio Spectrum

SmallSat, CubeSat, and NanoSatellite developers are seeking spectrum allocation, outside of the 435 to 437 MHz amateur satellite band dedicated to their specific bandwidth, data rate, and mission requirements.

Wouter Jan Ubbels at the Dutch space development company, ISIS - Innovative Solutions In Space B.V. plans a presentation on this topic at the European CubeSat Workshop in Brussels later this month.

ISIS notes that experimental, proof-of-concept demonstration missions find it increasingly more difficult to find spectrum in todays crowded bands. Obtaining commercial or research space frequency allocations is beyond the budgetary capability of many of these missions.

Some satellite developers may be able to adapt their communication requirements in order to operate in the amateur radio spectrum. In order to fully meet mission requirements on other projects a more suitable spectrum is quickly becoming a potential long term show stopper for the emerging nanosatellite market.

ISIS says they plan to attend the World Radio Conference, WRC, this month as part of the Dutch national delegation to to make use of the opportunity to informally sound the various opinions on this matter and investigate potential possibilities for creating a future proof solution ensuring the spectral needs of the community are met. This is potentially in line with discussions already going on in ITU study group WP7B. Potentially these plans for frequency allocation will be included in a future WRC.

[ANS thanks Wouter Jan Ubbels and ISIS for the above information]

Check Your Keps: ISS Performs Debris Avoidance Maneuver

UniverseToday reports that the ISS needed to perform a maneuver on Friday, January 13 to avoid debris from the 2009 collision between an inactive Russian Cosmos 2251 satellite and a commercial Iridium satellite.

U.S. Space Command recommended the space station perform a debris avoidance maneuver on Friday, January 13, 2012 to move out of harms' way and dodge a possible collision with the piece of space junk, said to be about 10 centimeters in diameter. The thrusters on the Zvezda service module fired at 1610 UTC on Friday to raise the orbit of the ISS.

Without the maneuver, the object would have made two close approaches to the station on consecutive orbits on Friday, passing within the "pizza box" shaped region around the station, measuring 0.75 kilometers above and below the station and 25 kilometers on each side (2,460 feet above and below and 15.6 by 15.6 miles).

A higher orbit for the ISS means that AOS will occur at a slightly later time than those predicted in existing Keplerian Elements. Users are encourage to update their tracking elements to maintain tracking accuracy.

[ANS thanks UniverseToday.com for the above information]

Sounds From Space Website Looking for Additional Sounds

Matthias, DD1US, would like to draw your attention to a collection of audio recordings, the "Sounds From Space" collection on his website at http://www.dd1us.de. This features a collection which has also a section dedicated to recordings of amateur radio satellite signals.

Please have a look at it. The idea is to give older radio amateurs the chance, to listen to signals of satellites which are already gone and the might have worked in the past, and to younger people interested in ham radio, to get them more excited in satellite communication.

In spite of the fact that the collection now has close to 1000 recordings he is still missing recordings from some amateur radio satellites. If anyone of you would be willing to contribute recordings to these satellite he would highly appreciate it. He has and always will give full credit to the source of the recordings. Please have a look in your older tapes and recordings!

Here is a list of the most wanted missing satellites:

Amsat Oscar 8
RS-1
RS-2
ISKRA-1
RS-3
RS-4
RS-5
RS-6
RS-8
ISKRA-3
Fuji-OSCAR-12
UOSAT OSCAR 15
WEBER OSCAR 18
UOSAT OSCAR 22
POSAT OSCAR 28
TMSAT OSCAR 31

PANSAT OSCAR 34
UOSAT OSCAR 36
ASUSAT OSCAR 37
WEBER OSCAR 39
SAUDI OSCAR 42
STARSHINE OSCAR 43
MYSAT OSCAR 46
KAGAYAKI (SORUNSAT-1)
ANUSAT
BEVO-1
WASEDA-SAT2
StudSAT

[ANS thanks Matthias, DD1US and The Sounds From Space website for
the above information]

ARISS Status Report - 9 January 2012

1. Poland Contact Successful

A successful Amateur Radio on the International Space Station (ARISS) contact was held on Monday, January 2 between Zesp�l Szk�l nr 2 in Zuromin, Poland and Dan Burbank, KC5ZSX on the ISS. Students asked questions to learn what an ordinary day on the ISS is like. Over 300 students and guests gathered for the event including several distinguished visitors: Head of Zuromin District, Mayor of Zuromin City, Head of Education Department Municipal Office of the City of Zuromin, Headmaster of junior grammar school in Biezun, Headmaster of Polish secondary school in Zuromin, Headmaster of ZS nr 2 in Zuromin and Headmaster of SSP in Kliczewo. Another 140 people watched streaming video of the event on the internet. The contact highlighted the curriculum at the school covering modeling, telecommunications and robotics.

2. New Proposal Cycle for ARISS-US Contacts

NASA Teaching From Space (TFS) office is accepting proposals for
ARISS-U.S. contacts to be held in the July 15, 2012 - January 15, 2013
time frame. The deadline for submitting proposals is January 30, 2012.
The last informational session will be held on Wednesday, January 11
at 3 pm CST to answer any questions concerning the proposal process.
To attend the session or to have questions answered, contact TFS at
JSC-TFS-ARISS@mail.nasa.gov or call 281-244-1919.

For more information, see the TFS Web site:
http://www.nasa.gov/audience/foreducators/teachingfromspace/students/aris
s.h
tml

[ANS thanks Carol, KB3LKI, for the above information]

/EX

In addition to regular membership, AMSAT offers membership in the President's Club. Members of the President's Club, as sustaining donors to AMSAT Project Funds, will be eligible to receive additional benefits. Application forms are available from the AMSAT Office.

73,
This week's ANS Editor,
Lee McLamb, KU4OS

15. Re: Where are 2 line elements?

Newsgroup: rec.radio.amateur.space
Date: 2012-01-17 11:40:37 UTC
From: Scott <acepilotREMOVE@bloomer.net>
Message-ID: <kMmdne_S4Myrw4jSnZ2dnUVZ_vudnZ2d@bright.net>
Source record: 165

On 1-16-2012 17:41, Hils wrote:
> On 2012-01-16 12:09, Scott wrote:
>> On 1-15-2012 23:05, Hils wrote:
>>
>>>
>>> Anyone fancy building a new mode A satellite (with a PSK
>>> engineering/science beacon)? :-)
>>
>> I prefer mode K. Had a lot of fun with the old RS12 bird! :)
>
> Could have two piggybacked, like RS12/13. Perhaps with a shared command
> system and science module.

That would be very cool. I miss the ease of working those RS birds. I used my Kenwood TS-520S as uplink on 15M and my Kenwood TS-690S for downlink on 10M (stock, no preamp). Had a homebrew highpass filter on the 690S to keep from overloading from the 520S during TX. Antennas were simple dipoles for each band. Doesn't get any easier than that! :)

Scott

16. Re: Where are 2 line elements?

Newsgroup: rec.radio.amateur.space
Date: 2012-01-17 22:06:50 UTC
From: Alan WA4SCA <WA4SCA@YAHOO.COM>
Message-ID: <11sbh7pdr2hts15g8tr0kv2jfggnmvtkvv@4ax.com>
Source record: 166

They were fun, and easy. Unfortunately the days of cheap launches of satellites is about done. These days, the direction is for CubeSats, which are 4" on a side. It is possible to contemplate deploying an efficient 10 meter antenna from a 4" cube, but be certain to be far enough away from the project engineer so that he can't choke you.

--
Alan
WA4SCA

17. Weekly Highlights of Solar and Geomagnetic Activity, 09 - 15 January 2012

Newsgroup: rec.radio.amateur.space
Date: 2012-01-17 22:30:08 UTC
From: SWPC.Webmaster@noaa.gov
Message-ID: <20120117223001.92D6033C52@panix2.panix.com>
Source record: 167
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.dx,rec.radio.amateur.space,rec.radio.shortwave,rec.radio.info

```
:Product: Weekly Highlights and Forecasts
:Issued: 2012 Jan 17 1552 UTC
# Prepared by the US Dept. of Commerce, NOAA, Space Weather Prediction Center
# Product description and SWPC contact on the Web
# http://www.swpc.noaa.gov/weekly.html
#
# Weekly Highlights and Forecasts
#
Highlights of Solar and Geomagnetic Activity
09 - 15 January 2012

Solar activity was at low to moderate levels. Activity was low
during 09 - 13 January. Moderate levels were reached on 14 January
due to an M1 flare at 14/1318 UTC from new Region 1401 (N17, L =
218, class/area Dai/200 on 15 January). Activity returned to low
levels on 15 January. There were no Earth-directed CMEs during the
period.

No proton events were observed at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit was at
normal to moderate levels during 09 - 12 January. Predominately
normal levels were observed during 13 - 15 January.

Geomagnetic field activity was at mostly quiet levels during 09 - 12
January. Activity increased to quiet to unsettled levels on 13
January due to a coronal hole high-speed stream (CH HSS). Field
activity decreased to quiet levels on 14 - 15 January.

Forecast of Solar and Geomagnetic Activity
18 January - 13 February 2012

Solar activity is expected to be at low levels with a chance for
isolated M-class activity from Region 1401, 1402 (N27, L=215,
class/area Dho/270 on 15 January) and old Region 1389 (S23, L=087),
which is expected to return to the visible disk on 21 January.

No proton events are expected at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit is
expected to be at normal flux levels during 18 January - 03
February. Normal to moderate levels are expected from 04 - 07
February following a CH HSS. Normal levels are expected for the
remainder of the period.
```

Geomagnetic field activity is expected to be quiet on 18 January. Conditions are expected to be at quiet to unsettled levels with a chance for isolated active periods on 19 - 20 January due to a CME observed early on 16 January. Mostly quiet conditions are expected to return from 21 January - 01 February. Quiet to unsettled conditions are expected from 02 - 04 February due to a recurrent CH HSS. Predominately quiet conditions are expected from 05 - 08 February. A second CH HSS is expected to become geoeffective on 09 February bringing quiet to unsettled conditions. Mostly quiet conditions are expected on 10 - 11 February before becoming quiet to unsettled for the duration of the period due to a third CH HSS.

18. Re: Where are 2 line elements?

Newsgroup: rec.radio.amateur.space
Date: 2012-01-18 18:56:41 UTC
From: 202@nic.invalid
Message-ID: <4f1714ea.12210129@news.nic.fi>
Source record: 168

On Tue, 17 Jan 2012 11:40:37 +0000, Scott <acepilotREMOVE@bloomer.net> wrote:

>On 1-16-2012 17:41, Hils wrote:
>> On 2012-01-16 12:09, Scott wrote:
>>> On 1-15-2012 23:05, Hils wrote:
>>>
>>>>
>>>> Anyone fancy building a new mode A satellite (with a PSK
>>>> engineering/science beacon)? :-)
>>>
>>> I prefer mode K. Had a lot of fun with the old RS12 bird! :)
>>
>> Could have two piggybacked, like RS12/13. Perhaps with a shared command
>> system and science module.
>
>That would be very cool. I miss the ease of working those RS birds. I
>used my Kenwood TS-520S as uplink on 15M and my Kenwood TS-690S for
>downlink on 10M (stock, no preamp). Had a homebrew highpass filter on
>the 690S to keep from overloading from the 520S during TX. Antennas
>were simple dipoles for each band. Doesn't get any easier than that! :)
>
>Scott

I used a 5 watt 2m FM rig for uplink, connecting key to PTT line of microphone. Antenna just 1/4
wavelenght vertical. RS-10 and RS-12 had very sensitive receivers...

Listening to my CW signal 10m downlink, could not tell that I was using 2m FM radio.
Disadvantage was that I could tune my transmitting frequency in 25 kHz steps only ;)

Mika

19. ANS-022 AMSAT News Service Weekly Bulletins

Newsgroup: rec.radio.amateur.space
Date: 2012-01-22 14:52:01 UTC
From: JoAnne Maenpaa <k9jkm@comcast.net>
Message-ID: <000f01ccd915$5ce05c90$16a115b0$@net>
Source record: 169
Cross-posted to: rec.radio.amateur.space,rec.radio.info

AMSAT NEWS SERVICE
ANS-022

ANS is a free, weekly, news and information service of AMSAT North America, The Radio Amateur Satellite Corporation. ANS reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in designing, building, launching and communicating through analog and digital Amateur Radio satellites.

Please send any amateur satellite news or reports to:
ans-editor@amsat.org

In this edition:
* Fox-1: Solar Panel Campaign
* Amateur Radio Help Needed for RS-39 Deployment on January 24
* SKN on OSCAR 2012 Best Fist Nominations Due
* University of Liege Students Provide Update on OUFTI-1 D-Star Cubesat
* More University Cubesat Projects Rolling Out
* NASA Launches STEMconnector Website
* Satellite Shorts From All Over
* Winners in the ARISSat-1/KEDR Chicken Little Contest
* Winners of the ARISSat-1/KEDR Grab the Last Telemetry Contest
* ARISS Status Report - 9 January 2012

SB SAT @ AMSAT $ANS-022.01
ANS-015 AMSAT News Service Weekly Bulletins

AMSAT News Service Bulletin 022.01
From AMSAT HQ SILVER SPRING, MD.
January 22, 2012
To All RADIO AMATEURS
BID: $ANS-022.01

Fox-1: Solar Panel Campaign

As AMSAT embarks on the Fox-1 Project, here is an opportunity to literally put your callsign on the Fox hardware. AMSAT is looking for major donations to help underwrite the cost of solar cells/ panels, one of the more significant expenses of the project. These solar cells are needed for the flight unit as well as for the a flight spare. As Fox-1 will have solar cells on all six sides of the spacecraft and given the relatively small surface area avail- able on each side (at most 4" by 4" per side), AMSAT will invest in high efficiency solar cells to gain as much power as possible to operate the spacecraft.

Complete details on how you can donate are posted on the web:
http://www.amsat.org - the top news item.

AMSAT President Barry Baines, WD4ASW, said, "We highlighted at the recent 2011 Symposium that AMSAT is actively developing Fox-1, a new spacecraft that is designed to replace AO-51. Fox-1 development now takes on a great sense of urgency."

AMSAT Vice-President of Engineering, Tony Monteiro, AA2TX says, "Fox-1 will advance single-channel FM repeater satellite operation beyond the experience of AO-51. It will advance AMSAT to the next generation of AO-51 class satellites."

Fox-1 is designed for longer operational life with these features:

+ Fox-1 is designed to operate in sunlight without batteries once the battery system fails. This applies lessons learned from AO-51 and ARISSat-1 operations.

+ In case of IHU failure Fox-1 will continue to operate its FM repeater in a basic, 'zombie sat' mode, so that the repeater remains on-the-air.

+ Fox-1 is designed as the immediate replacement for AO-51. Its U/V (Mode B) transponder will make it even easier to work with modest equipment.

+ From the ground user's perspective, the same FM amateur radio equipment used for AO-51 may be used for Fox-1.

+ Extending the design, Fox-2 will benefit from the development work of Fox-1 by adding more sophisticated power management and Software Defined Transponder (SDX) communications systems.

Barry concluded, "AMSAT's ability to provide a replacement spacecraft and get it launched is dependent upon the active support of donors who wish to see Fox-1 fly."

Several opportunities to make your donation to keep amateur radio in space include:

+ Return the form sent with the letter to reply with your donation for the Fox-1 Project.
- All donations over $40 will receive a Fox pin.
- Donations of $120 or more qualify you for AMSAT President's Club

+ Call Martha at the AMSAT Office +1-888-FB AMSAT (1-888-322-6728)
+ Paypal donation widget on the main page at: http://www.amsat.org
+ Paypal donation widget for Project Fox at:
http://www.amsat.org/amsat-new/fox/
+ You can also go to the Paypal site and send your donation to
martha@amsat.org.
+ The AMSAT Store: http://www.amsat-na.com/store/categories.php

Project Fox web site provide a good overview of the technical progress of the new satellite: http://www.amsat.org/amsat-new/fox/

[ANS thanks AMSAT President Barry Baines, WD4ASW, and AMSAT's Project Fox Engineering team for the above information]

Amateur Radio Help Needed for RS-39 Deployment on January 24

The Chibis-M satellite,RS-39 is planned to be deployed from the Progress M-13M cargo ship into a 500 km orbit on January 24 at approximately 23:00-23:59 UTC.

RS-39 has CW beacons on 435.315 and 435.215 MHz that can be received directly by radio amateurs and schools for educational outreach purposes. Telemetry will be transmitted on these downlink frequencies. The RS-39 Morse Code telemetry format is available as an MS-Word document from: http://tinyurl.com/RS-39-Morse-Code-Telemetry

The RS-39 team is requesting support from amateur radio operators for any reception reports of Chibis-M. Special attention is needed during the first orbits as these are outside the range of control stations. Each report will be confirmed by special QSL card.

The Space Research Institute of the Russian Academy of Sciences (RAS) will activate an e-mail address for radio amateurs around to send reception reports. The http://chibis.cosmos.ru/ link is in Russian at present. (http://tinyurl.com/RS-39-Chibis-M is available in google English.)

Chibis-M arrived at the ISS on November 2, 2011 aboard the Progress M-13M cargo craft. It has been studying Terrestrial Gamma Ray Flashes which are hypothesized to be produced by beams of very energetic electrons, accelerated in the intense electric fields generated by large thunderstorm systems.

On January 23, 2012 Progress M-13M will undock from the ISS. Progress will then perform two orbital maneuvers to raise its orbit to 500 km. On January 24 Chibis-M will separate from the Progress cargo craft.

RS-39 also carries receivers listening between 0.1 - 40 kHz and 26-48 MHz for a space weather experiment.

Additional information can be found on these links:
http://www.uk.amsat.org/3910
http://www.energia.ru/en/iss/researches/geophis/19.html

[ANS thanks Trevor, M5AKA and AMSAT-UK for the above information]

SKN on OSCAR 2012 Best Fist Nominations Due

Many thanks to all who participated in AMSAT's Straight Key Night on OSCAR 2012. If you have not already done so, please take a moment to nominate someone you worked for Best Fist. Remember, your nominee need not have the best fist of those you heard, only of those you worked. Send your nomination to w2rs@amsat.org.

This year's event is dedicated to the memory of Don Brown, W1JSM, who passed away in 2011, aged 90. Don was a longtime, enthusiastic VHF/UHF and satellite operator, and one of our most frequent Best Fist winners.

Those nominated will be recognized in an ANS bulletin in early February, and in The AMSAT Journal.

[ANS thanks Ray Soifer, W2RS for the above information]

University of Liege Students Provide Update on OUFTI-1 D-Star Cubesat

The OUFTI-1 Newsletter, published by students at the University of Liege, Belgium reports they plan to have their D-Star transponder cubesat launched toward the end of 2012. The satellite will have uplinks in the 145 MHz band and downlinks on 435.015 and 435.045 MHz.

Subsystem status reports are written up on the following:

+ The components of the Attitude Control System were ordered and received. Two sets of one permanent magnet and four hysteretic rods are waiting for integration of engineering and flight models.

+ The Electrical Power Supply subsystem has its main functionalities implemented and tested. Some secondary functions, such as USB battery charger, are still to be implemented.

+ The antenna deployment mechanism subsystem was tested at Centre Spatial de Li�ge (CSL) last June. The tests were performed under vacuum at low (-60�C) and high (+60�C) temperatures. The tests proved the correct functioning of the system but it was also noticed that the deployment of the antennas could be blocked by a remaining part of the retention wire. This problem is currently being investigated in order to improve the design and guarantee the deployment.

+ The Communication subsystem is complete. Regarding the radio-frequency part (mainly amplifiers), some tests were performed on the receiver circuit and showed that improvements were needed. The transmitter circuit will be designed by Audric Hay (HELMO-Gramme). He will also integrate and test the whole subsystem.

+ The On-Board Computer software was coded and tested. This year, Alexei Dick (HEPL-INPRES) will develop a mode for pre-flight tests of the satellite.

+ Thermal Analysis showed that the system could not keep batteries above 0�C. The thermal control system was complemented with poly-

mer insulators. Testing in June at CSL demonstrated this new solution worked.

+ The vibrational behavior of OUFTI-1 during launch was studied thanks to a detailed finite-element model. Gilles Bodson (HELMO-Gramme) will keep this model up-to-date and perform tests on the engineering model.

+ The Ground Station hardware is operational at the Montefiore Institute. The station is regularly used for satellite tracking. Alain Collette (HELMO-Gramme) will develop the Mission Control Software.

The OUFTI-1 team is planning for a launch towards the end of 2012. Opportunities have been identified and discussions are ongoing with a launch provider.

[ANS thanks the OUFTI-1 Newsletter for the above information]

More University Cubesat Projects Rolling Out

Japan: ITF-1 (YUI) CubeSat

Students at the University of Tsukuba are working on the ITF-1 (YUI) CubeSat project that is planned to be launched on a H-IIA rocket in 2013. The orbit will be 400 km by 350 km with an inclination of 65 degrees.

The formal name ITF-1 comes from the initial letter of the university slogan "Imagine The Future". The satellite also has a popular name YUI which means "bond" in Japanese, it came from the project's concept "Creating the Worldwide Human Community".

The 435MHz satellite beacon will send telemetry by a Morse Code audio tone on an FM transmitter running 300 milliwats output. It should be possible to receive it using simple equipment such as a handheld transceiver or scanner. Telemetry information will be first compressed into binary data and then cut into 5 bits and converted into 10 - 15 Morse code messages.

Reception reports will be acknowledged with a certificate and the telemetry will be made available on the web.

The UTF-1 Project Manager is Ayano Okamura and you can read her blog:
http://tinyurl.com/ITF-1-ProjectManagerBlog

The Chief Tech blog by Asai Eisuke is at:
http://tinyurl.com/ITF-1-TechBlog

ITF-1 website in Google English http://tinyurl.com/CubeSat-ITF-1
AMSAT-UK posted this news at: http://www.uk.amsat.org/3809

Spain: Xatcobeo

Students at the University of Vigo in Spain have built Xatcobeo a CubeSat that carries a Software Defined Radio (SDR) and a solar panel deployment mechanism. A launch on an ESA Vega rocket in February is planned.

The IARU Amateur Satellite Coordination Panel pages report that it carries three payloads:

+ SRAD: a Software Defined Radio. The aim is to test under space conditions a reconfigurable radio. Different modulation schemes will be selected depending on the link conditions.

+ RDS: an ionizing radiation dosimeter. This dosimeter will take measurements of ionizing radiation in a typical LEO orbit for amateur satellites, thus increasing our knwoledge about radiation conditions in this environment.

+ PDM: a solar panel deployment mechanism to be tested in-flight.

Xatcobeo plans to use FFSK with AX.25 on UHF. These frequencies have been coordinated - Simplex 437.365 MHz and SSR downlink on 145.940 MHz.

Further info available at http://www.xatcobeo.com/ and a video at:
http://www.youtube.com/watch?feature&#65533;ayer_embedded&v&#65533;UmLhA7ioE

Pakistan: ICUBE-1 CubeSat

Students at the Institute of Space Technology (IST) built Pakistan's first CubeSat ICUBE-1. Like a number of new CubeSats its communications subsystem is capable of acting as an "AO-16 mode" FM to DSB transponder.

The IARU amateur satellite frequency coordination panel pages say that the VHF downlink will operate as a 1k2 BPSK beacon but has the capability of being configured as an FM-DSB transponder. A downlink on 145.947 MHz and an uplink on 435.060 MHz have been coordinated.

It is planned to have an imaging payload with a small low resolution CMOS sensor. The camera will be mounted on the Z+ face of the ICUBE and can take continental scale images.

ICUBE-1 is scheduled to be launched by Interorbital Systems.

ICUBE http://www.icube.org.pk/
Student Satellite Project http://www.ist.edu.pk/student_satellite.html
Institute of Space Technology (IST) http://www.ist.edu.pk/

[ANS thanks the student cubesat teams and AMSAT-UK for the above information]

NASA Launches STEM connector Website

The new STEMconnector website launched on Nov. 30, 2011. This new website serves as a national gateway to "who is doing what" in science, technology, engineering and mathematics, or STEM.

STEMConnector is a nationwide collaboration of companies, nonprofit associations and professional societies, STEM-related research and policy organizations, and academic institutions concerned about the plight of STEM education in the United States.

STEMConnector is designed to link "all things STEM" by constructing a comprehensive website that provides connections to national, state and local STEM entities and their own content through a variety of search tools.

Visit the new site to find state-by-state information, a blog, events and resources related to STEM: http://www.stemconnector.org/

[ANS thanks NASA Education Express for the above information]

Satellite Shorts From All Over

+ Bob McGwier N4HY has made available an extensive collection of amateur radio satellite pictures available for download. The pictures range from the early 1960?s with OSCAR's 1, 2, 3, etc. to the more recent Eagle and SuitSat: http://n4hy.smugmug.com/AMSAT

+ AMSAT Director of Awards, Bruce Paige, KK5DO wrote, "If you remember the photos a few weeks ago KC9ROI braving the cold to work ARISSat-1, I thought that was pretty neat and I had to get a Satellite Communicators Club Certificate to him and what better way than at one of his club meetings. I sent the certificate out the next day for a meeting they had Saturday, January 14. They framed the certificate and presented it to him." Photos posted on the club website, see: http://www.n9xh.org/

+ The 15th Annual Southeastern VHF Society Conference to be held in Charlotte, NC. on April 20-21, 2012. Papers and presentations are solicited on both the technical and operational aspects of VHF, UHF and Microwave weak signal amateur radio. The deadline for the submission of papers and presentations is February 17, 2012. The technical program is being handled by Robin Midgett, K4IDC. Send all questions & comments to Robin via: K4IDC at comcast dot net. Also refer to SEVHFS web pages at: http://www.svhfs.org/

+ VE7DAO/VA7ISS posted a video recorded during the final days of ARISSat-1/KEDR: http://tinyurl.com/ve7dao

+ The FUNcube amateur radio satellite project is featured on the website of Electronics Weekly: http://tinyurl.com/6twqvny

+ A visualization of the launch and deployment of 50 Cubesats in the QB50 project can be seen at:

http://www.youtube.com/watch?v=s7nKVhjs4

+ The European Southern Observatory posted a video of a zoom sequence beginning at Earth, past the stars in our galaxy, and on to the center of the Milky Way galaxy in the constellation of Sagittarius: http://www.youtube.com/watch?v=HUNvEKUY8

+ Clint Bradford, K6LCS has been granted permission to reprint the QST article, "A 2 meter and 70 cm Portable Tape Measure Beam" by John Portune, W6NBC:
http://www.work-sat.com/Work-Sat/Antennas_files/W6NBC-Beam.pdf

Clint also has permission to reprint, "QRP to the ISS" by Doug Cook, KD5PDN, which appeared in the February, 2012 issue of QST. Doug walks the reader through building a simple tape measure beam, and how to successfully work the ISS with it and a handheld radio:
http://www.work-sat.com/Work-Sat/Sat_Skeds_files/QRP-ISS_2.pdf

+ Congratulations to Ted, K7TRK on receiving VUCC Award #226. Ted commented, "My thanks to all who contributed with contacts and cards. Most of the blame goes to John, K8YSE, who got me started on the venture and to Loren, K7CWQ for continuing encouragement and advice."

+ A video by Doug Cook, KD5PDN, showing how to set up a Yaesu VX-8R for ISS APRS packet data sending and receiving and other aspects to make a digital contact with the International Space Station can be viewed at:
http://www.youtube.com/watch?feature=player_embedded&v=S3EqRooN8

Winners in the ARISSat-1/KEDR Chicken Little Contest

The Chicken Little Contest received 77 entries from 17 different countries, and all continents except Antarctica. Based on comments sent along with the submissions, a wide variety of techniques were used. These ranged from detailed calculations, to comparisons with past satellites, to guesses based on birthdays.

The winners in each category are:

+ Kindergarten through grade 8: Cora Haefner, KK4ECV, Fort A.P. Hill, VA, USA

+ High School, grades 9 through 12: Cameron, Lancashire, UK

+ Adult: Thomas Frey, HB9SKA, Birr, Switzerland

Cora, KK4ECV and Thomas, HB9SKA were both within 15 hours of the best data we have from Space Track: approximately 0700 on 4 January 2012, in the South Atlantic.

All three winners have received an appropriate Chicken Little Certificate, and the congratulations of the ARISSat-1/KEDR Team. Thanks go to all those who entered, and especially educators who worked with students.

[ANS thanks the Alan Biddle, WA4SCA and the ARISSat-1/KEDR Team for the above information]

Winners of the ARISSat-1/KEDR Grab the Last Telemetry Contest

Thanks to the dedication of stations around the world, a nearly steady stream of digital telemetry reports were received in the final days from ARISSat-1/KEDR:

31 Dec -- 1125
01 Jan -- 1537
02 Jan -- 1541
03 Jan -- 1048
04 Jan -- 107

Many other reports were received from stations copying the voice, SSTV, and telemetry transmissions, as well as some contacts through the transponder.

The final digital data received was copied by both JA8TCH, Mori Seiji, Sapporo City, Japan, and JA0CAW, Tetsurou Satou, Niigata City, Japan. It was received at 06:02:14, 4 January, 2012, less than an hour before the estimated point of loss in the South Atlantic. Their data, combined with the submissions of many others, constitutes the most comprehensive coverage of the reentry of any amateur satellite. JA8TCH and JA0CAW will receive a certificate for their achievement. They and all who submitted telemetry throughout the ARISSat-1/KEDR mission have the thanks of the entire team.

[ANS thanks the Alan Biddle, WA4SCA and the ARISSat-1/KEDR Team for the above information]

Amateur Radio on the International Space Station (ARISS) Status Report
January 16, 2012

1. Upcoming School Contact

Vrije Technische Scholen (VTS), located in Sint-Niklaas, Belgium has completed (ARISS) contact on Wednesday, January 18 at 09:47 UTC. VTS is a technical and professional secondary school for students ages 12 - 18. Lesson plans associated with this contact have been adapted for the different age and skill levels of the students and cover electricity, mechanics, antennas and space.

2. Burbank Participates in ARISS Contact with Descartes High School

Descartes High School in Montigny-Le-Bretonneux, France participated in an Amateur Radio on the International Space Station (ARISS) contact with Dan Burbank, KC5ZSX on Monday, January 9. Burbank talked about how astronauts from different cultures get along on the ISS and fielded questions about the various experiments performed onboard the Space Station. About three hundred students and visitors were present for the event, including Astronaut Leopold Eyharts who exchanged greetings with Burbank. Presentations were given before the contact and a Question and Answer session followed. The ARISS contact was a featured activity for students who have been studying life and work on the ISS and through collaboration with the town's amateur radio club, have also been learning about radio and wireless technology. NASA has posted video of the event on its Web site. See:
http://www.nasa.gov/multimedia/videogallery/index.html?media_id84835
0
1

3. Belgian Students Radio Andre Kuipers

On Friday, January 13, an Amateur Radio on the International Space Station (ARISS) contact was held between students from Atheneum Borgloon in Belgium and Astronaut Andre Kuipers, PI9ISS on the ISS. The radio connection was provided by telebridge station K6DUE in Greenbelt, Maryland. The ARISS event highlighted a science curriculum covering the history of space travel, the solar system and the ISS. Other activities included space workshops and a field trip to the Eurospace Center in Transinne. Approximately 100 people tied into the contact through streaming video on the internet.

4. ARISS Contact Article in Canadian Magazine

The January/February 2012 issue of the Canadian Amateur Magazine (TCA) has a great article on an ARISS contact held in Thetford Mines, Qu&#65533;bec on November 14, 2011. The contact was arranged by a fourteen year old at the school. The story, written by ARISS Delegate Maurice-Andr&#65533; Vigneault, VE3VIG, is titled, "Quebec Youth Masters ISS Contact." A photo and the table of contents may be viewed at:
http://www.rac.ca/tca/

5. KPARC ARISS Presentation

ARISS volunteer Dave Jordan, AA4KN gave a talk on the ARISS program during the Sun City, Florida Kings Point Amateur Radio Club (KPARC) monthly meeting on January 9. His presentation covered basic operations of the ARISS organization, a brief history of ARISS beginning with SAREX and a section discussing the ARISSat-1 mission during which he showed released photos and others that illustrated the assembly, testing and general development efforts that took place in the Orlando lab. In concluding his talk, Jordan suggested that the club members form a group to meet with local schools and encourage them to submit proposals for future ARISS contacts. Some photos from the presentation are available here: http://www.kparc.org/archive/aa4kn.htm

6. Astronaut Training Status

Astronaut Alexander Gerst is interested in earning his amateur radio license and will be participating in training sessions in February. He is scheduled to fly with Expedition 40 in May 2014.

[ANS thanks Carol, KB3LKI, for the above information]

/EX

In addition to regular membership, AMSAT offers membership in the President's Club. Members of the President's Club, as sustaining donors to AMSAT Project Funds, will be eligible to receive additional benefits. Application forms are available from the AMSAT Office.

73,
This week's ANS Editor,
Dee Interdonato, NB2F
Nb2f at amsat dot org

20. Re: Where are 2 line elements?

Newsgroup: rec.radio.amateur.space
Date: 2012-01-23 11:38:26 UTC
From: Scott <acepilotREMOVE@bloomer.net>
Message-ID: <s_CdnU4mCfMv24DSnZ2dnUVZ_qmdnZ2d@bright.net>
Source record: 170

On 1-23-2012 01:13, Hils wrote:

>
> Well, that explains the decisive shift to nanosats. A review of some
> recent cubesats isn't exactly inspiring. I could be wrong, but I suspect
> that an analysis of launch and deployment successes and mission
> accomplishments wouldn't look too good by comparison with the earlier
> generations of larger sats. Those of us who worked through or heard
> Oscars 9,10,11,13 and the RS-xx birds may have seen the golden age.

I agree with that 100%...we did see the golden age. Doesn't look too
good for SSB in the future :(

21. Weekly Highlights of Solar and Geomagnetic Activity, 16 - 22 January 2012

Newsgroup: rec.radio.amateur.space
Date: 2012-01-24 22:33:01 UTC
From: SWPC.Webmaster@noaa.gov
Message-ID: <20120124223001.E47EC33C52@panix2.panix.com>
Source record: 171
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.dx,rec.radio.amateur.space,rec.radio.shortwave,rec.radio.info

```
:Product: Weekly Highlights and Forecasts
:Issued: 2012 Jan 24 2144 UTC
# Prepared by the US Dept. of Commerce, NOAA, Space Weather Prediction Center
# Product description and SWPC contact on the Web
# http://www.swpc.noaa.gov/weekly.html
#
# Weekly Highlights and Forecasts
#
Highlights of Solar and Geomagnetic Activity
16 - 22 January 2012

Solar activity reached moderate levels as Regions 1401 (N18, L=213,
class/area Eki/540 on 19 January) and 1402 (N28, L=214, class/area
Eko/630 on 17 January) both produced M-class events. Region 1401
produced an M1/1n on 17/0453Z and an M1/1n on 18/1912Z. Region 1402
followed with an M3/2n on 19/1605Z. The 19 January event was
associated with and Type IV radio emission and a full halo CME. Type
II emissions were detected on 19/1252Z and 19/1933Z with speeds of
933 km/s and 694 km/s respectively. Partial halo CMEs were also
observed on 16 and 18 January. Activity decreased to very low levels
late on 19 January. Isolated low-level C-class flares were observed
on 20 - 22 January. Plage Region 1396 (N27, L=287, class/area
Dao/110 on 17 January) produced a C1 flare at 20/2112Z associated
with a Type II radio sweep (945 km/s) and a non-Earth-directed CME.
Region 1402 produced a long-duration C1 flare at 20/2333Z associated
with a weak Type IV radio sweep.

An enhancement of the greater than 10 MeV proton flux at
geosynchronous orbit began around 20/0800Z and continued through the
end of the period.

The greater than 2 MeV electron flux at geosynchronous orbit was at
normal to moderate levels the entire period.

Geomagnetic field conditions ranged from quiet to unsettled levels,
with a brief excursion into active-major storm levels at high
latitudes on 22 January. Field conditions were predominately quiet
from 17-21 January. On 22 January, an interplanetary shock passed
the ACE spacecraft at approximately 22/0514Z, likely indicating the
arrival of the full-halo CME observed on 19 January in LASCO
imagery. This was followed by a geomagnetic sudden impulse (SI) at
22/0614Z (31 nT observed by the boulder magnetometer). Field
activity increased to unsettled to major storm levels at high
latitudes following the SI.
```

Forecast of Solar and Geomagnetic Activity
25 January - 20 February 2012

Solar activity is expected to be low with M-class flares likely until Regions 1401 and 1402 depart on 28 January. Predominantly quiet levels are expected for the remained of the period.

Protons greater than than 10 MeV are expected to remain above event threshold from 25 - 26 January. A return to background levels is expected for the remainer of the period.

The greater than 2 MeV electron flux at geosynchronous orbit is expected to be at normal to moderate levels the entire period.

The geomagnetic field is expected to be at active to minor storm levels on 25 January as effects from the CME from 23 January wane. Quiet levels are expected on 26 January. Quiet to unsettled levels are expected on 27 January as a coronal hole high speed stream (CH HSS) becomes geoeffecitve. A return to quiet levels is expected until 02 - 03 February, with quiet to unsettled levels expected as another CH HSS becomes geoeffective. Predominantly quiet levels are expected from 04-08 February. Another CH HSS is expected to become geoeffective with quiet to unsettled levels expected from 09-10 February. Predominantly quiet levels are expected for the remainder of the period.

22. Re: Where are 2 line elements?

Newsgroup: rec.radio.amateur.space
Date: 2012-01-25 10:10:23 UTC
From: Rob <nomail@example.com>
Message-ID: <slrnjhvl8f.c32.nomail@xs8.xs4all.nl>
Source record: 172

Hils <hils@saynotospam.net> wrote:
> During the early 1980s, much home tracking of circular orbits was done
> using a map of the world with rotating transparent cursors on which were
> printed a satellite's track from predicted equatorial crossing times.
> Computer satellite tracking was first done using a roughly circular
> model, later a model based on Kepler's equations with corrections for
> gravity and drag. (The now-ubiquitous SGP4 model wasn't published until
> 1988.)

> James Miller became something of a legend with his articles on things as
> diverse as tracking software (anyone remember plan-10?), adding the sun

The tracking software used by the vast majority of amateurs in the
early days was not by James Miller but by Tom Clark, W3IWI.

When my google searches are correct, this program, "BASIC Orbits",
was published in 1981. It used kepler elements.

I used this program for quite some time on 8-bit microcomputers of
those days, first to calculate AO-10 passes and later modified it a
lot to control my antennas during passes of PACSAT-class satellites.
(LEO sats that you wanted to track automatically because there already
was so much to do during the pass)

23. Re: Where are 2 line elements?

Newsgroup: rec.radio.amateur.space
Date: 2012-01-25 17:43:50 UTC
From: Rob <nomail@example.com>
Message-ID: <slrnji0fqm.mot.nomail@xs8.xs4all.nl>
Source record: 173

Hils <hils@saynotospam.net> wrote:
> It would be kind of neat to be able to combine the interesting
> satellites of the 1980s and early 1990s with today's whizzy home PCs,
> broadband and internet. CubeSats are better than nothing, but they're
> not the same.

The problem with internet is that any communication that you can do
via amateur satellites can now be easier and more efficiently done via
internet.

In the PACSAT days it was really cool to have a flying fileserver where
you could upload files of about 0-100KB size (up to maybe 400KB) and
then later download them at any other location around the globe. It
was used to share small documents and pictures between amateurs around
the globe, and to forward messages between terrestrial packet BBSes
in parallel to the existing 300 baud packet network on 20m.
There was no real alternative to transferring data like that, except
by telephone modem on international calls. The broad public had not
yet seen e-mail and worldwide networks.

You needed to setup a quite specialized station (AZ/EL steerable yagis
on 2m and 70cm, preferably with automatic control, computer with
special software for up- and downloading, special modem, etc) and then
you could upload such a file in one or multiple passes of the LEO sat
and all the others in the footprint could receive it on the downlink,
also often taking several passes for a larger file to be completed.

It was fun. I still have all the files I received that way stored on
a 250 MB harddisk.

Today, I can transfer such a file to anywhere in the world in .1 second.
That has taken much of the fun out of doing it via amateur satellite,
and certainly the incentive for any newcomer to spend all the effort
and money required to do this.

You need to consider that change in global communication whenever you
suggest a new experiment in amateur satellites that is all alike it was
25 years ago. Just like 25 years ago many of us had a 2m portable and
carried it around at hamfests or even when shopping in the city, being
able to communicate with others while not being at home and using the
telephone. Today, everyone can do that with their GSM.

24. ANS-029 AMSAT News Service Weekly Bulletins

Newsgroup: rec.radio.amateur.space
Date: 2012-01-29 02:25:16 UTC
From: JoAnne Maenpaa <k9jkm@comcast.net>
Message-ID: <002201ccde2d$388b7560$a9a26020$@net>
Source record: 174
Cross-posted to: rec.radio.amateur.space,rec.radio.info

AMSAT NEWS SERVICE
ANS-029

ANS is a free, weekly, news and information service of AMSAT North America, The Radio Amateur Satellite Corporation. ANS reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in designing, building, launching and communicating through analog and digital Amateur Radio satellites.

Please send any amateur satellite news or reports to:
ans-editor@amsat.org

In this edition:

* January 30 Announcement Date for NASA ELaNa CubeSat Launch Initiative
* ARISSat-1/KEDR Legacy Lives on in the DK3WN SatBlog
* Fifty Years: OSCAR-1 Celebration Continues
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* Opportunity for Citizen Scientists: Globe At Night Project
* Last Call for SKN on OSCAR 2012 Best Fist Nominations
* SumbandilaSat SO67 Reported Beyond Repair
* Satellite Shorts From All Over

SB SAT @ AMSAT $ANS-029.01
ANS-029 AMSAT News Service Weekly Bulletins

AMSAT News Service Bulletin 029.01
>From AMSAT HQ SILVER SPRING, MD.
January 29, 2012
To All RADIO AMATEURS
BID: $ANS-029.01

January 30 Announcement Date for NASA ELaNa CubeSat Launch Initiative

AMSAT-NA is waiting to hear whether our proposal to include the Fox-1 cubesat in NASA's "Educational Launch of NanoSat" (ELaNa) program has been accepted. NASA selects projects that they deem to have merit in support of their strategic and educational goals. Projects that are selected will be able to enter into a collaboration agreement where NASA will cover the integration and launch costs of the satellite.

AMSAT, working with ARRL, highlighted the educational merit of the project including the incorporation of Fox-1 into the ARRL Teacher Institute seminars. ARRL also provided a letter of support for the project that was a key component of our proposal.

The Clay Center for Science and Technology at the Dexter and Southfield schools in Brookline, MA, also provided a letter of support that was an important part of our proposal. The Clay Center noted that they use AMSAT satellites such as ARISSat-1 in their educational activities for K-12 students and that they look forward to making use of Fox-1.

The completed proposal, at 159 total pages, required a significant effort that was all done by volunteers. NASA will select from all of the submissions and announce the winning projects by January 30, 2012.

[ANS thanks the Fox-1 Project Team for the above information]

ARISSat-1/KEDR Legacy Lives on in the DK3WN SatBlog

Tune your browser to http://www.dk3wn.info/p/?p=25476 to enjoy a unique ARISSat-1 sound archive on-line.

Thanks to Mike Rupprecht, DK3WN, ARISSat-1's identifier message, "Hi this is ARISSat-1 Amateur Radio Satellite RS01S", has been recorded and archived on the web. The DK3WN SatBlog has posted the ID, the female voice spoken telemetry, male voice spoken telemetry.

Also, 25 audio files of the messages by children of countries around the world transmitted by ARISSat-1 along with the translated sentence are included. The "secret word" appears in the last of the message of each country.

ARISSat-1's international greetings are in Japanese, Bengali, Flemish, Chinese, Dutch, Spanish (Spain), Spanish (South America), Spanish (Puerto Rico), Afrikaans, Portuguese, French, English (UK), English (Canada), English (USA), German, Swedish, Catalonian, Nepalese, Russian, and Hebrew. The message is displayed in its native tongue and an English translation.

[ANS thanks Mike Rupprecht, DK3WN and Mineo Wakita, JE9PEL for the above information]

Fifty Years: OSCAR-1 Celebration Continues

The ARRL has posted a new, highly informative article on how the world's first Amateur Radio satellite, OSCAR-1, came to be designed, built and launched.

The ARRL's Space Communication web page has an English translation of, "OSCAR-1 Launched 50 Years Ago", written by Andreas Bilsing,

DL2LUX. This article was first published in the German magazine Funk-amateur. It is reprinted with their permission. OSCAR-1 was launched just over 50 years ago, on December 12, 1961.

See the ARRL Space Communication web page at:
http://www.arrl.org/space-communication

A direct link the the article in English is:
http://www.arrl.org/files/file/Technology/Bilsing.pdf

Andreas lives in Leipzig, Germany. He is a member of AMSAT-DL and has written articles in the AMSAT-DL Journal and Funkamateur. He also wrote the first German Summits on the Air (SOTA) manual. His other interests include home brewing, qrp, digimodes and satellites.

Licensed since 1975 at age 16 he has held prior calls of DM4MTG, DM2FAG, Y26AG, and Y23AM. He holds degrees in energy process engineering and automation which is applies to his work in an engineering company as project manager in natural gas, responsible for instrumentation of gas plants, pipelines and underground gas storage.

Andreas says the view from his shack includes Leipzig's St. Thomas church where the famous composer J. S. Bach worked.

The AMSAT 2011 Space Symposium in San Jose, California featured Lance Ginner, K6GSJ, one of the OSCAR-1 developers as our banquet speaker. Lance's talk can be viewed at: http://youtu.be/EWSCCZY1FgQ.

MilSatMagazine.com mentions OSCAR-1 in an article about early U.S. Recon Satellites in the October 2011 issue:
http://www.milsatmagazine.com/2011/MSM_Oct_2011.pdf
OSCAR-1 rode to orbit with the Discoverer-36 satellite.

A copy of the OSCAR 1 slides used at AMSAT's display during Space Day at the National Air and Space Museum in Washington, D.C. can be downloaded from AMSAT-NA at:
http://tinyurl.com/OSCAR-1-Presentation (pdf ~5MB)

[ANS thanks the ARRL, AMSAT, Andreas Bilsing DL2LUX and amsat-bb for the above information]

Chibis-M RS-39 Deployed - Signals Heard Intermittently

The Chibis-M satellite, RS-39, was deployed from the Progress M-13M cargo ship into a 500 km orbit on January 24, as planned. RS-39 has CW beacons on 435.315 and 435.215 MHz.

The RS-39 team requested support from amateur radio operators for any initial reception reports of Chibis-M as its first orbits were outside of the range of the satellite's control stations. Reception reports are being received by e-mail to:
amateur-rs39@chibis.cosmos.ru. Each report will be confirmed by a

special QSL card.

Shortly after RS-39 was deployed reception reports posted on amsat-bb said strong signals initially were heard in India (VU3TYG, VU2WMY), United States (KB1PVH), Australia (VK5DG), Argentina (LU4EOU), and central Europe (Jakub Hruska).

Nitin, VU3TYG posted a short video of receiving RS-39 at his QTH: http://www.youtube.com/watch?v=l4db7uToltI

On later orbits VKFAK reported the telemetry showed a drop in voltage aboard RS-39 to 2.8 volts in USUN telemetry field. At this time a report from VU2WMY said the CW signal was only heard briefly at AOS. RS-39 was not heard on a morning pass on January 25 over North America from a report by W1MSG.

Google translation of http://chibis.cosmos.ru/ reports that the control station switched off RS-39 after initial testing was completed on the fourth orbit to save battery power. When testing resumes plans included calibration of the magnetometer, calibration of solar sensors, and testing the three-axis attitude determination algorithm using the magnetometer and sun sensor. Later postings from the control station show they are switching RS-39 on and off at various times.

Mike Rupprecht DK3WN has made available software to decode the RS-39 telemetry. A description of the program is posted by AMSAT-UK at: http://www.uk.amsat.org/4029. This page includes links to download the software. Mike has created telemetry decoder software for several satellites. These can be found DK3WN satellite software page: http://tinyurl.com/DK3WN-Sat-Software (in Google English).

Amateur stations tracking RS-39 reported that elements associated International launch number 11062C, catalog 38051 correlated with RS-39. Other stations reported success using the tracking elements for the Progress M-13M cargo ship, however the orbits between RS-39 and Progress were beginning to separate.

Web tracking of Chibis-M, RS-39 can found at this page: http://chibis.cosmos.ru/cyclogr/prepare1/google/index.html

Keplerian elements can be found by clicking the two small gears icon in the upper left corner of the map; then select Satellites from the menu that pops up; then select RS-39.

A video from Roscosmos showing the RS-39 deploymnet from the Progress M-13M cargo ship an be found here: http://www.roscosmos.ru/main.php?id=216

[ANS thanks the reporting stations for their signal reports and the above information]

VEGA Preparations Proceeding Toward February 9 Launch

Space-Travel.com published an article reporting that final checkout of Europe's new Vega launcher has been completed marking another milestone towards its February 9 maiden flight from Europe's Spaceport in Kourou, French Guiana.

All four stages have undergone final acceptance, including the testing of the avionics, guidance, telemetry, propulsion, separation pyrotechnics and safety systems. These steps culminated on 13 January with Vega's 'synthesis control checks', where all systems were put into launch mode for the vehicle's final acceptance. This included pressurizing the AVUM propulsion systems that actuate the thruster valves. The rocket's elements were switched on from the control bench to simulate the launch countdown. The onboard software then took over and simulated the different stages of a flight. The interfaces between the vehicle and the control bench were also tested. The test review confirmed that everything ran as expected and that the launcher is ready for flight.

Vega is designed to launch payload masses ranging from 300 kg to 2500 kg, depending on the type and altitude of the orbit required by the customers. The benchmark is for 1500 kg into a 700 km altitude polar orbit.

http://www.esa.int/SPECIALS/Vega/
http://tinyurl.com/vega-update (space-travel.com)

+ Xatcobeo (a collaboration of the University of Vigo and INTA, Spain) to demonstrate software-defined radio and solar panel deployment.

+ Robusta (University of Montpellier 2, France) to test and evaluate radiation effects (low dose rate) on bipolar transistor electronic components.

+ e-st@r (Politecnico di Torino, Italy) to demonstration of an active 3-axis Attitude Determination and Control system including an inertial measurement unit.

+ Goliat (University of Bucharest, Romania) to provide imaging of the Earth surface using a digital camera and in-situ measurement of radiation dose and micrometeoroid flux.

+ PW-Sat (Warsaw University of Technology, Poland) to test a deployable atmospheric drag augmentation device for de-orbiting CubeSats. PW-Sat carries an FM to DSB amateur radio transponder with an FM input on 435.020 MHz and DSB output on 145.900 MHz.

+ MaSat-1 (Budapest University of Technology and Economics): to demonstrate various spacecraft avionics, including a power conditioning system, transceiver and on-board data handling.

+ UniCubeSat GG - (University of Rome): The UNICubeSat mission goal is the in situ measurement of atmospheric density. Downlink fre-

quencies are 437.305 MHz or 437.345 MHz 9k6 FSK.

ESA CubeSats delivered for first Vega flight news web page:
http://www.esa.int/esaMI/Education/SEM3L0WWVUG_0.html

ESA Education - CubeSats
http://www.esa.int/esaMI/Education/SEM3N03MDAF_0.html

A picture of ALMASat-1 and the six CubeSats is posted at AMSAT-UK:
http://tinyurl.com/c8o73zw (uk.amsat.org)

Mineo Wakita, JE9PEL provides complete coverage of the Vega launch
on his 'ESA CubeSats Update' web pages. You'll find an overview of
each of the satellite missions, frequencies, modulation/protocols,
and links to the developers home web pages posted at:
http://www.ne.jp/asahi/hamradio/je9pel/esa9cubf.htm

[ANS thanks Space-Travel.com, ESA, JE9PEL for the above information]

Opportunity for Citizen Scientists: Globe At Night Project

The GLOBE at Night program is an international campaign to raise
public awareness of the impact of light pollution by inviting citi-
zen scientists to measure their night sky brightness and to submit
their observations to a website from a computer or smart phone.

The GLOBE at Night campaign has run for two weeks each winter/spring
for the last six years. People in 115 countries have contributed 66,000
measurements, making GLOBE at Night one of the most successful light
pollution awareness campaigns.

See http://www.globeatnight.org/ for details.

In 2012 there remain three opportunities to participate in GLOBE at
Night: February 12-21, March 13-22, April 11-20.

This project consists of five Easy Star-Hunting Steps:

1) Find your latitude and longitude.
2) Find Orion, Leo or Crux by going outside more than an hour
after sunset (about 8-10pm local time).
3) Match your nighttime sky to one of our magnitude charts.
4) Report your observation.
5) Compare your observation to thousands around the world.

Teacher Activity Packets and Family Activity Packets are available
from the website.

[ANS thanks the Globe At Night project for the above information]

Last Call for SKN on OSCAR 2012 Best Fist Nominations

Many thanks to all who participated in AMSAT's Straight Key Night on OSCAR 2012. If you have not already done so, please take a moment to nominate someone you worked for Best Fist. Remember, your nominee need not have the best fist of those you heard, only of those you worked. Send your nomination to w2rs@amsat.org.

This year's event is dedicated to the memory of Don Brown, W1JSM, who passed away in 2011, aged 90. Don was a longtime, enthusiastic VHF/UHF and satellite operator, and one of our most frequent Best Fist winners.

Those nominated will be recognized in an ANS bulletin in early February, and in The AMSAT Journal.

[ANS thanks Ray Soifer, W2RS for the above information]

SumbandilaSat SO67 Reported Beyond Repair

The Southern Africa SA AMSAT web page (http://www.amsatsa.org.za/) lists the current status of SumbandilaSat SO67 as, "No service all activities suspended; Beacon is not operational."

AMSAT-UK has published the news from South African Defence Web pages (http://www.defenceweb.co.za) in an article titled, "SumbandilaSat beyond repair", South Africa's second satellite, SumbandilaSat, is no longer fulfilling its main purpose due to technical problems and is essentially beyond repair, its maker SunSpace says.

SunSpace, told defenceWeb that although contact can still be made with the satellite, it cannot capture images and is thus "not fulfilling its main purpose".

He said that chances of repairing the satellite are virtually zero and that SunSpace has moved on to other projects.

SumbandilaSat was damaged during a solar storm in the June last year. The power supply to SumbandilaSat's onboard computer stopped working and the satellite stopped sending back images.

According to DefenceWeb, South Africa's Department of Science and Technology (DST) is planning to launch a constellation of satellites similar to SumbandilaSat in the next 10 to 15 years. One of these will be SumbandilaSat 2, which will be larger and more reliable than its predecessor. Funding for SumbandilaSat 2 will be sought during the next financial year, starting April 1. Development will take about four years. The image processing methods and mission control systems pioneered on SumbandilaSat will be used on future satellites.

The news item at AMSAT-UK can be found at:
http://www.uk.amsat.org/4076
The news at DefenceWeb can be found at:
http://tinyurl.com/defenceweb (defenceweb.co.za)
Southern Africa SA-AMSAT web page at:
http://www.amsatsa.org.za/

[ANS thanks SA-AMSAT, AMSAT-UK, and DefenceWeb.co.za for the above information]

Satellite Shorts From All Over

+ Patrick WD9EWK/VA7EWK has posted videos of his station and operting tips about working the non-FM satellites with two radios.
VO-52 with Yaesu FT-817ND transmitter, as my Kenwood TH-F6A receiver, Elk Antennas handheld 2m/70cm log periodic for antenna:
http://www.youtube.com/watch?v=gpLw3stcxWY
http://www.youtube.com/watch?v=4Og1P2fjmTs
http://www.youtube.com/watch?v=K10RiIEyjfE
AO-27 pass: http://www.youtube.com/watch?v=a0IdEPsajkU
FO-29 pass: http://www.youtube.com/watch?v=OP80fVF9Lek

+ Watch a time-lapse video taken from the ISS as it passed above central Africa, Madagascar and the southern Indian Ocean. The night time flyover shows numerous lightning storms and the thin band of our atmosphere, with a layer of airglow above, set against a stunning backdrop of the Milky Way and a barely-visible Comet Lovejoy,
http://www.youtube.com/watch?feature=player_embedded&v=GxH3Pnknhps

+ Richard Garriot has released a documentary of his trip to space.
See the trailer at http://firstrunfeatures.com/intheaters.html
His web site is http://firstrunfeatures.com/manonamission/

+ The article on the FUNcube satellite has now appeared in the printed publication Electronics Weekly (Jan. 25-31). For details of how to download a PDF of the article see:
http://www.uk.amsat.org/4006

+ The ARISS monthly teleconference was held on Tuesday, January 17. Topics of discussion included the ITU notification of ARISS frequencies, an update on the Columbus module and a status report on ARISSat-1. Minutes have been posted:
http://ariss.rac.ca/arisstel2012-01-17.htm

+ Yuri, UT1FG/MM, has been reported on the DX boards (Jan. 11-Jan. 18) to be back at sea, traveling across the Atlantic Ocean activating "Wet Grids". This may be a chance to work him via satellite if you find him within range.

+ Students working on the Aalto-1 CubeSat have released a 4 minute video showing a visualization of the launch and deployment of the satellite, see: http://www.uk.amsat.org/3883

[ANS thanks everyone for the above information]

/EX

In addition to regular membership, AMSAT offers membership in the President's Club. Members of the President's Club, as sustaining donors to AMSAT Project Funds, will be eligible to receive additional benefits. Application forms are available from the AMSAT Office. And with that, please keep in mind the planet Neptune was discovered more than 150 years ago in 1846, and since then it still has to complete an orbit around the Sun, as one Neptune year equals to 165 Earth years.

73,
This week's ANS Editor,
JoAnne Maenpaa, K9JKM

25. Updated List 2012 Solutions Manuals, Instructor Manuals & Test Banks Collection. Largest Collection Over The Net !!!

Newsgroup: rec.radio.amateur.space
Date: 2012-01-31 10:38:16 UTC
From: tbwork tbwork <tbwork008@gmail.com>
Message-ID: <63b31f12-f267-42fd-9cbb-ba687b768896@cd5g2000vbb.googlegroups.com>
Source record: 175

Hello,
We would like to inform you that we have updated our list with the following new titles.
You can contact us directly at tbwork.ads(at)gmail.com .

==========

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2011 Federal Taxation, 5th Edition 2011, Pratt.Kulsrud, Test Bank

21st Century Astronomy, 3rd Edition, Blumenthal.Hester.Kay.Smith.Voss, Instructor Manual

21st Century Astronomy, 3rd Edition, Blumenthal.Hester.Kay.Smith.Voss, Test Bank

A Concise Introduction to Logic, 11th Edition 2012, Hurley, Test Bank

A Framework for Human Resource Management, 6th Edition, Gary Dessler, Instructor Manual

A Framework for Human Resource Management, 6th Edition, Gary Dessler, Test Bank

A History of Modern Psychology, 10th Edition 2012, Schultz.Schultz, Instructor Manual

A History of Modern Psychology, 10th Edition 2012, Schultz.Schultz, Test Bank

A History of Modern Psychology, 9th Edition, Schultz.Schultz, Test Bank

A History of Narrative Film, 4th Edition, Cook, Test Bank

A History of Western Music, 8th Edition, Burkholder.Grout.Palisca, Instructor Manual

A History of Western Music, 8th Edition, Burkholder.Grout.Palisca, Test Bank

A Second Course in Statistics; Regression Analysis, 7th Edition 2012, Mendenhall.Sincich, Solutions Manual

Abnormal Psychology, 11th Edition, Kring.Neale.Johnson, Instructor Manual

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Abnormal Psychology, 4th Edition, Seligman.Walker.Rosenhan, Test Bank

Abnormal Psychology; An Integrative Approach, 6th Edition 2012, Barlow.Durand, Instructor Manual

Abnormal Psychology; An Integrative Approach, 6th Edition 2012, Barlow.Durand, Test Bank

Abnormal Psychology; Perspectives with MyPsychKit_Fourth Edition, 4th Edition, Dozois.Firestone, Instructor Manual

Abnormal Psychology; Perspectives with MyPsychKit_Fourth Edition, 4th Edition, Dozois.Firestone, Test Bank

Access to Health, 12th Edition 2012, Donatelle, Solutions Manual

Access to Health, 12th Edition 2012, Donatelle, Test Bank

Accounting Information Systems, 12th Edition 2012, Romney.Steinbart, Instructor Manual & Solutions Manual

Accounting Information Systems, 12th Edition 2012, Romney.Steinbart, Test Bank

Accounting Information Systems, 7th Edition, James Hall, Solutions Manual

Accounting Principles, 10th Edition, Weygandt.Kimmel.Kieso, Instructor Manual & Solutions Manual

Accounting Principles, 10th Edition, Weygandt.Kimmel.Kieso, Test Bank

Accounting Using Excelr for Success, 2nd Edition 2012, Reeve.Warren.Duchac, Solutions Manual

Accounting, 24th Edition 2012, Warren.Reeve.Duchac, Instructor Manual & Solutions Manual

Accounting, 24th Edition 2012, Warren.Reeve.Duchac, Test Bank

Accounting, 9th Edition 2012, Horngren.Harrison.Oliver, Instructor Manual & Solutions Manual

Accounting, 9th Edition 2012, Horngren.Harrison.Oliver, Test Bank

Adober Dreamweaverr CS5; Complete, 1st Edition 2011, Shelly.Wells, Instructor Manual & Solutions Manual

Adober Dreamweaverr CS5; Complete, 1st Edition 2011, Shelly.Wells, Test Bank

Adober Dreamweaverr CS5; Comprehensive, 1st Edition 2011, Shelly.Wells, Instructor Manual & Solutions Manual

Adober Dreamweaverr CS5; Comprehensive, 1st Edition 2011, Shelly.Wells, Test Bank

Adober Dreamweaverr CS5; Introductory, 1st Edition 2011, Shelly.Wells, Instructor Manual & Solutions Manual

Adober Dreamweaverr CS5; Introductory, 1st Edition 2011, Shelly.Wells, Test Bank

Adober Photoshopr CS5 Revealed, 1st Edition 2011, Elizabeth Eisner Reding, Instructor Manual & Solutions Manual

Adober Photoshopr CS5 Revealed, 1st Edition 2011, Elizabeth Eisner Reding, Test Bank

Advanced Accounting, 11th Edition 2012, Fischer.Taylor.Cheng, Solutions Manual

Advanced Accounting, 11th Edition 2012, Fischer.Taylor.Cheng, Test Bank

Advanced Financial Accounting, 9th Edition 2011, Baker.Christensen.Cottrell, Instructor Manual & Solutions Manual

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American Government; Power and Purpose_Brief, 11th Edition, Ginsberg.Lowi.Shepsle.Ansolabehere, Instructor Manual

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Business Essentials_Fifth Canadian Edition, 5th Edition, Ebert.Griffin.Starke, Test Bank

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Business Math Using Excelr, 2nd Edition 2012, Burton.Shelton, Test Bank

Business Mathematics, 9th Edition 2012, Cleaves.Hobbs.Noble, Instructor Manual

Business, 11th Edition 2012, Pride.Hughes.Kapoor, Instructor Manual

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Campbell Essential Biology with Physiology with MasteringBiologyr, 3rd Edition, Simon.Reece.Dickey, Test Bank

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The Exceptional Child; Inclusion in Early Childhood Education, 7th Edition 2012, Allen.Cowdery, Instructor Manual

The Exceptional Child; Inclusion in Early Childhood Education, 7th Edition 2012, Allen.Cowdery, Test Bank

The Humanities; Culture_Continuity and Change_Volume 1, 2nd Edition 2012, Henry M Sayre, Instructor Manual

The Humanities; Culture_Continuity and Change_Volume 1, 2nd Edition 2012, Henry M Sayre, Test Bank

The Humanities; Culture_Continuity and Change_Volume 2, 2nd Edition 2012, Henry M Sayre, Instructor Manual

The Humanities; Culture_Continuity and Change_Volume 2, 2nd Edition 2012, Henry M Sayre, Test Bank

The Legal Environment of Business, 11th Edition 2012, Meiners.Ringleb.Edwards, Instructor Manual

The Legal Environment of Business, 11th Edition 2012, Meiners.Ringleb.Edwards, Test Bank

The Legal Environment of Business; Text and Cases; Ethical_Regulatory_Global_and Corporate Issues, 8th Edition 2012, Cross.Miller, Instructor Manual & Solutions Manual

The Legal Environment of Business; Text and Cases; Ethical_Regulatory_Global_and Corporate Issues, 8th Edition 2012, Cross.Miller, Test Bank

The Management of Technology and Innovation; A Strategic Approach, 2nd Edition 2011, White.Bruton, Instructor Manual

The Management of Technology and Innovation; A Strategic Approach, 2nd Edition 2011, White.Bruton, Test Bank

The Media of Mass Communication, 10th Edition 2011, John Vivian, Instructor Manual

The Media of Mass Communication, 10th Edition 2011, John Vivian, Test Bank

The Music Kit, 4th Edition, Tom Manoff, Instructor Manual

The Musicians Guide to Theory and Analysis, 1st Edition, Clendinning.Marvin, Instructor Manual

The Musicians Guide to Theory and Analysis, 1st Edition, Clendinning.Marvin, Test Bank

The Musician's Guide to Aural Skills, 1st Edition, Phillips.Clendinning.Marvin, Instructor Manual

The Norton Anthology of African American Literature, 2nd Edition, Gates.McKay.Madison, Instructor Manual

The Personality Puzzle, 5th Edition, Funder, Instructor Manual

The Personality Puzzle, 5th Edition, Funder, Test Bank

The Physics of Everyday Phenomena; A Conceptual Introduction to Physics, 7th Edition 2012, Griffith.Brosing, Instructor Manual

The Physics of Everyday Phenomena; A Conceptual Introduction to Physics, 7th Edition 2012, Griffith.Brosing, Test Bank

The Politics of Power, 6th Edition, Katznelson.Kesselman.Draper, Test Bank

The Promise and Performance of American Democracy, 10th Edition 2012, Bond.Smith, Instructor Manual

The Real World; An Introduction to Sociology, 2nd Edition, Ferris.Stein, Instructor Manual

The Real World; An Introduction to Sociology, 2nd Edition, Ferris.Stein, Test Bank

The Science and Engineering of Materials, 6th Edition 2011, Askeland.Fulay.Wright, Solutions Manual

The Theory of Interest, 3rd Edition, Kellison, Solutions Manual

The Web Collection Revealed Premium Edition; Adobe Dreamweaver CS5_Flash CS5 and Photoshop CS5, 1st Edition 2011, Bishop.Shuman.Reding, Instructor Manual & Solutions Manual

The Web Collection Revealed Premium Edition; Adobe Dreamweaver CS5_Flash CS5 and Photoshop CS5, 1st Edition 2011, Bishop.Shuman.Reding, Test Bank

The Web Warrior Guide to Web Design Technologies, 1st Edition, Gosselin.Sklar.Slaybaugh.Guthrie.Soe.Lopez, Instructor Manual & Solutions Manual

The Web Warrior Guide to Web Design Technologies, 1st Edition, Gosselin.Sklar.Slaybaugh.Guthrie.Soe.Lopez, Test Bank

The World; A History_Volume 2, 2nd Edition, Felipe Fernandez-Armesto, Instructor Manual

The World; A History_Volume 2, 2nd Edition, Felipe Fernandez-Armesto, Test Bank

Theory and Practice of Group Counseling, 7th Edition, Gerald Corey, Instructor Manual

Theory and Practice of Group Counseling, 7th Edition, Gerald Corey, Test Bank

Theory and Practice of Group Counseling, 8th Edition 2012, Gerald Corey, Instructor Manual

Theory and Practice of Group Counseling, 8th Edition 2012, Gerald Corey, Test Bank

THINK Sociology, 2nd Edition 2011, Carl, Instructor Manual

THINK Sociology, 2nd Edition 2011, Carl, Test Bank

Total Fitness and Wellness, 5th Edition, Powers.Dodd, Instructor Manual

Total Fitness and Wellness, 5th Edition, Powers.Dodd, Test Bank

Training in Interpersonal Skills; TIPS for Managing People at Work, 6th Edition 2012, Robbins.Hunsaker, Instructor Manual

Training in Interpersonal Skills; TIPS for Managing People at Work, 6th Edition 2012, Robbins.Hunsaker, Test Bank

Transportation; A Supply Chain Perspective, 7th Edition 2011, Coyle.Novack.Gibson.Bardi, Instructor Manual

Transportation; A Supply Chain Perspective, 7th Edition 2011, Coyle.Novack.Gibson.Bardi, Test Bank

Traversing Philosophical Boundaries, 4th Edition 2012, Hallman, Instructor Manual

Understanding American Government, 13th Edition 2012, Welch.Gruhl.Rigdon.Thomas, Instructor Manual

Understanding American Government, 13th Edition 2012, Welch.Gruhl.Rigdon.Thomas, Test Bank

Understanding and Managing Organizational Behavior, 6th Edition 2012, George.Jones, Instructor Manual

Understanding and Managing Organizational Behavior, 6th Edition 2012, George.Jones, Test Bank

Understanding Behaviors for Effective Leadership, 2nd Edition, Howell.Costley, Instructor Manual

Understanding Behaviors for Effective Leadership, 2nd Edition, Howell.Costley, Test Bank

Understanding Business, 9th Edition, Nickels.McHugh.McHugh, Instructor Manual

Understanding Business, 9th Edition, Nickels.McHugh.McHugh, Test Bank

Understanding Psychology, 10th Edition, Feldman, Instructor Manual

Understanding Psychology, 10th Edition, Feldman, Test Bank

Understanding Psychology, 9th Edition, Morris.Maisto, Instructor Manual

Understanding Psychology, 9th Edition, Morris.Maisto, Test Bank

Understanding Public Policy, 13th Edition 2011, Dye, Instructor Manual

Understanding Public Policy, 13th Edition 2011, Dye, Test Bank

Understanding Symbolic Logic, 5th Edition, Virginia Klenk, Instructor Manual

Understanding Symbolic Logic, 5th Edition, Virginia Klenk, Test Bank

University Calculus_Early Transcendentals, 2nd Edition 2012, Hass.Weir.Thomas, Solutions Manual

University Calculus_Early Transcendentals, 2nd Edition 2012, Hass.Weir.Thomas, Test Bank

University Physics with Modern Physics with MasteringPhysicsr, 13th Edition 2012, Young.Freedman, Solutions Manual

University Physics with Modern Physics with MasteringPhysicsr, 13th Edition 2012, Young.Freedman, Test Bank

Urban Economics, 7th Edition, Arthur O'Sullivan, Instructor Manual

Using Excel & Access for Accounting 2010, 3rd Edition 2012, Glenn Owen, Instructor Manual

Using MIS, 4th Edition 2012, Kroenke, Instructor Manual

Using MIS, 4th Edition 2012, Kroenke, Test Bank

Using Peachtree Complete 2011 for Accounting, 5th Edition 2012, Glenn Owen, Instructor Manual

Using QuickBooks Premier 2010 for Windows, 1st Edition 2011, Purbhoo.Heaney, Solutions Manual

Using Simply Accounting by Sage Premium 2010, 1st Edition 2011, Mary Purbhoo, Instructor Manual & Solutions Manual

Using Simply Accounting by Sage Premium 2010, 1st Edition 2011, Mary Purbhoo, Test Bank

Valuation, 2nd Edition 2011, Titman.Martin, Solutions Manual

Vander's Human Physiology; The Mechanisms of Body Function, 12th Edition, Widmaier.Raff.Strang, Instructor Manual & Solutions Manual

Vander's Human Physiology; The Mechanisms of Body Function, 12th Edition, Widmaier.Raff.Strang, Test Bank

Viscous Fluid Flow, 3rd Edition, White, Solutions Manual

Visions of America; A History of the United States_Combined Volume, 1st Edition, Keene.Cornell.O'Donnell, Instructor Manual

Visions of America; A History of the United States_Combined Volume, 1st Edition, Keene.Cornell.O'Donnell, Test Bank

Visual Anatomy & Physiology with MasteringA&P, 1st Edition 2011, Martini.Ober.Nath, Test Bank

Visual Communication; Images with Messages, 4th Edition, Lester, Test Bank

Visualizing Technology_Complete, 1st Edition 2012, Debra Geoghan, Instructor Manual & Solutions Manual

Visualizing Technology_Complete, 1st Edition 2012, Debra Geoghan, Test Bank

Visualizing Technology_Introductory, 1st Edition 2012, Debra Geoghan, Instructor Manual & Solutions Manual

Visualizing Technology_Introductory, 1st Edition 2012, Debra Geoghan, Test Bank

Water and Wastewater Technology, 7th Edition 2012, Hammer.Hammer, Solutions Manual

Water and Wastewater Technology, 7th Edition 2012, Hammer.Hammer, Test Bank

We the People; An Introduction to American Politics, 7th Edition, Ginsberg.Lowi.Weir, Instructor Manual

We the People; An Introduction to American Politics, 7th Edition, Ginsberg.Lowi.Weir, Test Bank

We the People; An Introduction to American Politics, 8th Edition, Ginsberg.Lowi.Weir, Instructor Manual

We the People; An Introduction to American Politics, 8th Edition, Ginsberg.Lowi.Weir, Test Bank

We the People; An Introduction to American Politics_Essentials Edition, 8th Edition, Ginsberg.Lowi.Weir, Instructor Manual

We the People; An Introduction to American Politics_Essentials Edition, 8th Edition, Ginsberg.Lowi.Weir, Test Bank

We the People; An Introduction to American Politics_Texas Edition, 8th Edition, Ginsberg.Lowi.Weir, Instructor Manual

We the People; An Introduction to American Politics_Texas Edition, 8th Edition, Ginsberg.Lowi.Weir, Test Bank

Web Design; Introductory, 4th Edition 2012, Shelly.Campbell, Instructor Manual & Solutions Manual

Web Design; Introductory, 4th Edition 2012, Shelly.Campbell, Test Bank

Western Civilizations, 16th Edition, Coffin.Stacey, Instructor Manual

Western Civilizations, 16th Edition, Coffin.Stacey, Test Bank

Western Civilizations, 7th Edition, Coffin.Stacey.Cole.Symes, Instructor Manual

Western Civilizations, 7th Edition, Coffin.Stacey.Cole.Symes, Test Bank

Western Civilizations_Brief, 2nd Edition, Coffin.Stacey, Instructor Manual

Western Civilizations_Brief, 2nd Edition, Coffin.Stacey, Test Bank

What's That Sound; An Introduction to Rock and Its History, 2nd Edition, John Covach, Test Bank

Women and Justice; It's a Crime, 5th Edition 2012, Roslyn Muraskin, Instructor Manual

Women and Justice; It's a Crime, 5th Edition 2012, Roslyn Muraskin, Test Bank

World Politics; Interests_Interactions_Institutions, 1st Edition, Frieden.Lake.Schultz, Instructor Manual

World Politics; Interests_Interactions_Institutions, 1st Edition, Frieden.Lake.Schultz, Test Bank

Worlds Together_Worlds Apart, 2nd Edition, Tignor.Adelman.Aron.Brown.Elman.Kotkin.Liu.Marchand.Pittman.Prakash.Shaw.Tsin, Instructor Manual

Worlds Together_Worlds Apart, 2nd Edition, Tignor.Adelman.Aron.Brown.Elman.Kotkin.Liu.Marchand.Pittman.Prakash.Shaw.Tsin, Test Bank

Worlds Together_Worlds Apart, 3rd Edition, Tignor.Adelman.Aron.Brown, Instructor Manual

Worlds Together_Worlds Apart, 3rd Edition, Tignor.Adelman.Aron.Brown, Test Bank

You May Ask Yourself; An Introduction to Thinking Like a Sociologist, 1st Edition, Dalton Conley, Instructor Manual

You May Ask Yourself; An Introduction to Thinking Like a Sociologist, 1st Edition, Dalton Conley, Test Bank

You May Ask Yourself; An Introduction to Thinking Like a Sociologist, 2nd Edition, Dalton Conley, Test Bank

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Contact Us At :
tbwork.ads(at)gmail.com .

26. Weekly Highlights of Solar and Geomagnetic Activity, 23 - 29 January 2012

Newsgroup: rec.radio.amateur.space
Date: 2012-02-01 02:30:11 UTC
From: SWPC.Webmaster@noaa.gov
Message-ID: <20120201023002.576D233C94@panix2.panix.com>
Source record: 176
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.dx,rec.radio.amateur.space,rec.radio.shortwave,rec.radio.info

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:Product: Weekly Highlights and Forecasts
:Issued: 2012 Jan 31 2314 UTC
# Prepared by the US Dept. of Commerce, NOAA, Space Weather Prediction Center
# Product description and SWPC contact on the Web
# http://www.swpc.noaa.gov/weekly.html
#
# Weekly Highlights and Forecasts
#
Highlights of Solar and Geomagnetic Activity
23 - 29 January 2012

Solar activity ranged from low to high levels. Region 1402 (N28,
L=214, class/area=Eko/630 on 17 January) produced a long duration
M8/2b flare at 23/0359 UTC. Multiple radio emissions from 25 MHz to
15.4 GHz, including a 5100 sfu Tenflare, and a Type IV sweep were
also observed. Finally, an approximately 1600 km/s asymmetric
full-halo coronal mass ejection (CME) was seen in SOHO/LASCO C2
imagery beginning at 23/0412 UTC. Activity returned to low levels as
Region 1402 made its way across the visible solar disk producing
occasional low to mid level C-class flares. On 27 January, Region
1402 moved to N29W71 before producing an X1/1f flare at 27/1837 UTC.
Radio phenomena, including a Type II (1523 km/s) and a Type IV radio
sweep with an 810 sfu Tenflare accompanied this flare. An asymmetric
halo CME was later observed in LASCO C2 coronagraph imagery with an
estimated plane-of-sky speed near 2000 km/s. Region 1402 rotated off
the west limb on 28 January. Region 1402&rsquo;s counterpart, Region
1401 (N18, L=213, class/area=Eki/540 on 19 January) was the second
largest and most magnetically complex (beta-gamma) region on the
disk during the period. Region 1401 was only responsible for a
couple of low level C-class flares during the period. Region 1401
decayed to spotless plage on 26 January.

Energetic proton flux levels reached strong levels during the period
as two proton events energized the Earth&#39;s magnetosphere. The
first event began minutes after the M8/2b flare on 23 January. The
10 MeV proton flux crossed the 10 pfu event threshold at 23/0530
UTC. The 10 MeV protons increased steadily to a peak flux of 6310
pfu at 24/1530 UTC, following the arrival of the interplanetary
shock. This 10 MeV proton event ended at 27/1025 UTC when the
enhancement dropped below the 10 pfu level. This 10 MeV proton event
was the largest enhancement since Oct 29, 2003 (29,526 pfu) and the
11th largest since January, 1975. Also with this event, the 100 MeV
proton flux exceeded the 1 pfu threshold. The 100 MeV flux began at
23/0445 UTC, increased to a peak of 2 pfu at 23/0750 UTC, then
```

steadily declined until it dropped below the 1 pfu threshold at 23/2050 UTC. The second event began on 27 January, after the X1.7/1f flare. The 10 MeV proton flux crossed the 10 pfu event threshold at 27/1905 UTC. The 10 MeV protons increased steadily to a peak flux of 796 pfu at 28/0205 UTC. The 10 MeV proton event was still in progress at the time of this report. The associated 100 MeV event began at 27/1900 UTC, reached a maximum of 11 pfu at 27/2140 UTC and ended on 28/2120 UTC.

The greater than 2 MeV electron flux at geosynchronous orbit began at background levels, but increased to moderate levels late on 23 January. Values increased to high levels on 27-28 January, before decreasing to moderate levels through the end of the period.

Geomagnetic field activity ranged from quiet to minor storm levels at mid-latitudes and briefly reached severe storm conditions at high latitudes. The magnetic field was mostly quiet on 23 January with an isolated minor storm observed at high latitudes from waning effects from a CME. On 24-25 January, activity increased to isolated minor storms at low latitudes and severe storms at high latitudes, due to the arrival of a CME, associated with the 23 January M8/2b flare. An interplanetary shock was observed at the ACE spacecraft at 24/1431 UTC followed by a 37 nT increase in total field, as measured by the ACE spacecraft, at 24/1439 UTC. A corresponding sudden impulse was observed in the Boulder magnetometer with a 22 nT deviation at 24/1504 UTC. Solar wind speed, as measured by the SOHO spacecraft, was approximately 750 km/s at the time of the shock passage before decreasing to approximately 650 km/s. The geomagnetic field decreased to predominantly quiet levels for the remainder of the period.

Forecast of Solar and Geomagnetic Activity
01 February - 27 February 2012

Solar activity is expected to be at very low to low levels from 01-09 February until old Regions 1401 and 1402 are due to return. Solar activity is expected to increase to low levels with a chance for M-class flares and a slight chance for X-class flares for the remainder of the period.

The greater than 10 MeV proton flux at geosynchronous orbit is expected to remain elevated from 01-02 February but below the 10 pfu threshold values. A return to background levels is expected from 03-08 February. On 09 February, old Regions 1401 and 1402 are due to return to the visible disk. From 09 February until the end of the forecast period, there will be a slight chance for a proton event.

The greater than 2 MeV electrons at geosynchronous orbit are expected to be at normal to moderate levels for the entire forecast period.

The geomagnetic field is expected to be at predominantly quiet
levels for the entire period. Quiet to unsettled levels are expected
on days 03-04 February, 09 February, 12 February, and 23 February.
This increased activity can be attributed to multiple, recurrent
coronal hole, high speed wind streams.

27. Crossposting Permitted to rec.radio.amateur.moderated

Newsgroup: rec.radio.amateur.space
Date: 2012-02-01 07:00:03 UTC
From: rram@panix.com
Message-ID: <radio/ham-radio/moderated/crossposting-1-1328079601@panix.com>
Source record: 177
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space,rec.radio.info

```
Posted-By: auto-faq 3.3.2 beta (PGPMoose V2.0, Perl 5.005)
Archive-name: radio/ham-radio/moderated/crossposting
Revision: 1.2 2011/11/02 04:08:53
Posting-Frequency: posted monthly
URL: http://www.panix.com/~rram/usenet/rram/index.html

Changes followed by "|".

After a 30-day public discussion and feedback period to gauge reader
opinions in March of 2009:

http://groups.google.com/group/rec.radio.amateur.moderated/browse_thread/thread/d7d337db35
f23326

the rec.radio.amateur.moderated Moderation Team had decided to consider |
amending its charter, and permit limited simultaneous crossposting to
rec.radio.amateur.moderated and one other unmoderated
amateur-radio-related discussion newsgroup. After a successful trial |
period (90 days, through early July 2009), we decided to adopt this |
change permanently. |

Approved rec.radio.amateur.* newsgroups are those that are currently
listed in the latest version of the "List of Big Eight Newsgroups" which
is crossposted monthly to news.announce.newgroups, news.groups, and
news.lists.misc.

Approved alt.radio.amateur.* and alt.ham-radio.* newsgroups are those
that have been created consistent with the suggestions in "So You Want
to Create an Alt Newsgroup" at:

http://www.faqs.org/faqs/alt-creation-guide/

Approved regional hierarchy newsgroups are those that contain either
"radio.amateur" or "ham-radio" in their names, including
uk.radio.amateur and aus.radio.amateur.misc.

We will make every reasonable effort to keep our list of approved
newsgroups up-to-date. In case we have overlooked any, and a submission
is rejected in error as a result, the rejected submitter can E-mail us
at our administrative contact address (in the signature at the bottom of
this article, and the default Reply-To for the rejection message)
requesting that it be added, and that the article be approved. We may
still choose to reject articles crossposted to any alt.* newsgroup with
an inappropriate name, including obscene language, embedded
name-calling, or encouragement of unlawful conduct.
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Please direct any comments, questions, or criticisms to
rec-radio-amateur-moderated-request@panix.com.

28. Radio Meteor Obs. Bull. January 2012 Quadrantids

Newsgroup: rec.radio.amateur.space
Date: 2012-02-04 16:44:21 UTC
From: Chris Steyaert <observations@rmob.org>
Message-ID: <a1oqi79tki60dlj3k6p5bgtcsvnqndtie0@4ax.com>
Source record: 178
Cross-posted to: rec.radio.amateur.space,sci.astro.amateur

Radio Meteor Observation Bulletin No. 222 of January 2012 (92 K) is available now as

http://www.rmob.org/rmobtext/rmob1201.txt

More information and the visual presentation of the hourly forward scatter counts can be found on

http://www.rmob.org

Chris

29. ANS-036 AMSAT News Service Weekly Bulletins

Newsgroup: rec.radio.amateur.space
Date: 2012-02-05 17:13:17 UTC
From: JoAnne Maenpaa <k9jkm@comcast.net>
Message-ID: <000f01cce429$6aad8310$40088930$@net>
Source record: 179
Cross-posted to: rec.radio.amateur.space,rec.radio.info

AMSAT NEWS SERVICE
ANS-036

ANS is a free, weekly, news and information service of AMSAT North America, The Radio Amateur Satellite Corporation. ANS reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in designing, building, launching and communicating through analog and digital Amateur Radio satellites.

Please send any amateur satellite news or reports to:

ans-editor@amsat.org

In this edition:
* Vega Launch on February 13 With Eight Amateur Band Cubesats
* SKN On OSCAR 2012 Best Fist Winners
* Remembering Mr. Smith - SuitSat-1 February 3, 2006
* New Version HamSatDroid App is Available
* Budapest University Masat-1 Telemetry Decoder Software Released
* February Arizona Centennial Special Event Plans Satellite Operation
* Can It Already Be That Time of Year For Field Day Planning?
* NASA Extends Deadline for Student Summer Internships
* Successful ARISS Contact with El Dorado County Students

SB SAT @ AMSAT $ANS-036.01
ANS-036 AMSAT News Service Weekly Bulletins

AMSAT News Service Bulletin 036.01
From AMSAT HQ SILVER SPRING, MD.
February 5, 2012
To All RADIO AMATEURS
BID: $ANS-036.01

Vega Launch on February 13 With Eight Amateur Band Cubesats

Vega is scheduled to launch on Monday, February 13, at 1000 UTC with eight student built amateur radio satellites. The launcher will first deploy the main payload, the LARES the Laser relativity Spacecraft and will then make an additional firing of the final OVUM stage before deploying the secondary cubesat payloads.

The planned timing for these deployments are as follows:

= T0+ 4245.30secs first PPOD, with (in order of ejection) XatCobeo, e-st@r, and Goliat
= T0+ 4255.30secs second PPOD, with (in order of ejection) Robusta,

MaSat-1 and PW-Sat
= T0+ 4265.30secs third PPOD, with UniCubeSat only
(These Cubesats will not deploy their antennas until >1800 seconds
after they leave their PODS.)

= T0+ 4275.30secs AlmaSat-1 - it is not known how soon this space-
craft will start transmitting after deployment

Frequencies for the satellites on the Vega Launch are:

+ ALMASat-1 - University of Bologna, Italy 437.465 MHz 1200 bps FSK
and 2407.850 MHz

+ Xatcobeo (a collaboration of the University of Vigo and INTA,
Spain) to demonstrate software-defined radio and solar panel
deployment. 437.365 MHz FFSK with AX.25 and 145.940 MHz SSR

+ Robusta (University of Montpellier 2, France) to test and evaluate
radiation effects (low dose rate) on bipolar transistor electronic
components. 437.325 MHz 1200 bps FM telemetry with one data burst
of 20 seconds every 3 minutes.

+ e-st@r (Politecnico di Torino, Italy) to demonstration of an
active 3-axis Attitude Determination and Control system including
an inertial measurement unit. 437.445 MHz 1200 bps AFSK.

+ Goliat (University of Bucharest, Romania) to provide imaging of
the Earth surface using a digital camera and in-situ measurement
of radiation dose and micrometeoroid flux. 437.485 MHz 1200 bps
AFSK.

+ PW-Sat (Warsaw University of Technology, Poland) to test a deploy-
able atmospheric drag augmentation device for de-orbiting CubeSats.
PW-Sat carries an FM to DSB amateur radio transponder with an FM
input on 435.020 MHz and DSB output on 145.900 MHz. There are 5
modes of operation:
- Receive only - no downlink
- CW Beacon CW - On-Off Keying (OOK) CW 12 WPM 435.020 MHz
- BPSK Beacon - BPSK 1200 bps AX25 (1 frame on 20 sec) 435.020 MHz
- Control communication mode. Downlink BPSK 1200 bps AX25 435.020 MHz
- Voice Repeater mode (aka "AO-16 mode) - uplink 435.020 MHz FM and
downlink 145.900 MHz DSB

+ MaSat-1 (Budapest University of Technology and Economics): to dem-
onstrate various spacecraft avionics, including a power condition-
ing system, transceiver and on-board data handling. 437.345 MHz
GFSK 625/1250 bps, CW. See the related article in these bulletins
describing the downloadable GFSK demodulator software.

+ UniCubeSat GG - (University of Rome): The UNICubeSat mission goal
is the in situ measurement of atmospheric density. Downlink fre-
quencies are 437.305 MHz or 437.345 MHz 9k6 FSK.

Mineo Wakita, JE9PEL provides complete coverage of the Vega launch on his 'ESA CubeSats Update' web pages. You'll find an overview of each of the satellite missions, frequencies, modulation/protocols, and links to the developers home web pages posted at: http://www.ne.jp/asahi/hamradio/je9pel/esa9cubf.htm

AMSAT-UK covers the Vega launch at: http://www.uk.amsat.org/4180

An ESA time-lapse showing the full assembly of the first Vega launcher at the launch pad at the ESA Spaceport in Kourou is posted at: http://www.youtube.com/watch?feature=player_embedded&v=YaUMSLU0aig

The university cubesat teams have requested reception reports. All observers are being encouraged to join the CubeSat IRC chat channel to pass on their news and comments in realtime. You will need an IRC client such as ChatZilla or mIRC to join the cubesat chat. Use the irc.freenode.net server. Then join the #cubesat channel. Many users set their chat nickname to "name_callsign".

[ANS thanks the cubesat teams, Mineo Wakita, JE9PEL, and AMSAT-UK for the above information]

SKN On OSCAR 2012 Best Fist Winners

Many thanks to all who participated in AMSAT's Straight Key Night on OSCAR 2012, held in memory of Don Brown, W1JSM. Activity was down this year, owing largely to there being only two satellites available for use: AMSAT-OSCAR 7 -- which remained in Mode A throughout the event -- and VUSAT-OSCAR 52.

Eight participants each received at least one Best Fist nomination: AA5PK, N4ZQ, N6EV, WA6ARA, WB2SIH, WB4LHD, WB8TGY, and WC7V.

Congratulations to 2012's Best Fist winners, and we'll see you in 2013!

[ANS thanks Ray Soifer, W2RS for the above information]

Remembering Mr. Smith - SuitSat-1 February 3, 2006

February 3 marks the sixth anniversary of the first ARISS satellite, SuitSat-1, which captured the imagination of students, radio amateurs, and people all around the world.

During a scheduled EVA outside the International Space Station, Valery Tokarev and Bill McArthur, KC5ACR deployed a retired Russian Orlan spacesuit with a radio transmitter and battery stuffed inside and antenna mounted on its helmet. The deployment took place just after 23:05 UTC on February 3, 2006. Transmissions were soon heard on 145.990 MHz.

SuitSat-1, also known as Mr. Smith, Ivan Ivanovich, RadioSkaf, Radio Sputnik and AMSAT-OSCAR 54, was an idea proposed by the ARISS-Russia team as a commemorative gesture celebrating the 175th anniversary of the Moscow State Technical University.

SuitSat-1 was programmed to continuously transmit recorded voice messages in several languages from students around the world. The signal began transmission approximately 15 minutes after SuitSat-1 was jettisoned. The downlink signal was noted to be weaker than expected, possibly due to a mechanical problem with the antenna.

SuitSat-1 re-entered the Earth's atmosphere on September 7, 2006, at 16:00 UTC about 1400 km south-southwest of Western Australia.

SuitSat-2 was planned following the public relations success of the first suit. Originally, it was to have solar cells strapped to the outside of the suit to provide charge for internal batteries and extend its life during orbit. When the Orlan suit planned to be used for this mission was no longer available, SuitSat-2 was redesigned into a satellite built into a deployable spaceframe with the solar cells and cameras for Slow Scan Television (SSTV) mounted on the outside of the box. The spacecraft was named ARISSat-1/KEDR which recently completed its successful mission.

[ANS thanks the ARISS and AMSAT archives for the above information]

New Version HamSatDroid App is Available

Dave Johnson, G4DPZ announced a new version of the free HamSatDroid app now available on the Android Market.

Upates to the app include:

+ tracking algorithm uses Dave's SGP4 implementation, as GENSO.
+ plot three orbits ahead on the map
+ plot the footprint
+ take keps from Celestrak

Dave says, "Thanks to the feedback we've had from the existing users, I've got quite a few more changes in development. Opinions are sought about making a small charge and paying the income into satellite building funds and supporting a server which might be introduced to improve functionality of the app."

See the HamSatDroid web page at:
https://sites.google.com/site/hamsatdroid/

Dave is the FUNcube Data Warehouse Developer and is also an AMSAT-NA Life Member and AMSAT-UK Committee Member.

[ANS thanks Dave Johnson, G4DPZ for the above information]

Budapest University Masat-1 Telemetry Decoder Software Released

Dr. Bandi Gschwindt HA5WH, Project Director of the Masat-1 CubeSat, the first Hungarian satellite, built in Hungary by students at the Budapest University of Technology and Economics, reports that their satellite is expected to be launched on the Vega maiden flight on February 9 with a planned deployment window between 10:00-13:00 UTC.

Masat-1's website is at: http://cubesat.bme.hu/?lang=en

The students are looking for hams to help with the reception of telemetry data on 437.345 MHz at 625/1250 bps baud rate GFSK, especially in the first two weeks after launch. The satellite's callsign is HA5MASAT.

The Masat-1 amateur radio webpage is at:
http://cubesat.bme.hu/radioamatoroknek/?lang=en
You can register on that page.

The Masat-1 Ground Station Client Software was prepared to process the 437.345 MHz GFSK 625/1250 bps transmission received from the satellite. The software provides the following functions:

+ Audio demodulation
+ Packet decoding
+ Packet data visualization
+ Frequency waterfall plot to aid radio tuning

Download the software and a test WAV file from:
http://cubesat.bme.hu/en/foldi-allomas/kliens-szoftver/

Planned orbit will be 300x1500 km, inclination 70deg. Launch will be by ESA from Kourou. A video showing Masat-1's elliptical orbit is posted online at: http://www.uk.amsat.org/4119

[ANS thanks Dr. Bandi Gschwindt, HA5WH and Perry Klein, W3PK for the above information]

February Arizona Centennial Special Event Plans Satellite Operation

The Central Arizona DX Association (CADXA) is very pleased to announce their special event operation in celebration of the Arizona Centennial during the week of February 13-19th, 2012.

K7UGA Satellite Operation

Using the callsign of the late Senior Senator, Barry M. Goldwater, K7UGA, CADXA members will be operating from stations located throughout Arizona during that week. Special operating locations from Tucson, Prescott and Phoenix will be on the air celebrating the 100th anniversary on Tuesday, February 14, 2012. They will be on all amateur bands (160-2 meters) and will be using CW, SSB, RTTY, PSK31 and Satellite modes.

Arizona's AMSAT Field Ops coordinator Patrick Stoddard, WD9EWK/VA7EWK announced satellite operations using the K7UGA callsign:

+ Watch for announcements on amsat-bb for the specific passes WD9EWK plans to operate using the K7UGA callsign on February 14.

+ Patrick plans to use the K7UGA call sign for his on-air satellite demonstrations from the Yuma, Arizona Hamfest on February 17-18, 2012. More information about this is on AMSAT's online calendar of events:
http://www.amsat.org/amsat-new/fieldops/eventDetail.php?eID=629

+ Also refer to http://www.qrz.com/db/k7uga for additional info.

All K7UGA QSL requests go to Bob Davies - K7BHM (qrz.com) with an SASE. Additional information is posted on the CADXA Web site at:
http://www.cadxa.org

Thunderbird Amateur Radio Club W7A Satellite Operation

Rick Tejera, K7TEJ says the Thunderbird Amateur Radio Club will be operating a special event station for the Arizona Centennial as well the weekend of Feb 11-12, 2012. Rick plans to operating on as many FM satellite passes as possible during the event using the W7A call.

[ANS thanks Patrick Stoddard, WD9EWK/VA7EWK and Rick Tejera, K7TEJ for the above information]

Can It Already Be That Time of Year For Field Day Planning?

AMSAT Director Contests and Awards, Bruce Paige, KK5DO reminds you that time of year is once again approaching - Field Day!

Each year the American Radio Relay League (ARRL) sponsors Field Day as an emergency preparedness exercise. The event takes place during a 24-hour period on the fourth weekend of June. For 2012 the event takes place during a 27-hour period between 1800 UTC on Saturday, June 23, 2012 and 2100 UTC on Sunday June 24, 2012. Those who set up prior to 1800 UTC on June 23 can operate only 24 hours.

The Radio Amateur Satellite Corporation (AMSAT) promotes its own version of Field Day for operation via the amateur satellites, held concurrently with the ARRL event.

With the loss of AO-51 and SO-67 field day this year is going to be most challenging. If you are considering ONLY the FM voice satellites like AMRAD-OSCAR-27 or SaudiSat-Oscar-50 for your primary AMSAT Field Day focus: Don't, unless you are simply hoping to make one contact for the ARRL rules bonus points.

The congestion on FM LEO satellites was so intense in prior years that we must continue to limit their use to one-QSO-per-FM-satellite. This includes the International Space Station. You will be allowed

one QSO if the ISS is operating Voice. You will also be allowed one digital QSO with the ISS or any other digital, non-store-and-forward, packet satellite (if operational).

If you have worked the satellites on Field Day in recent years, you may have noticed a lot of good contacts can be made on some of the less-populated, low-earth-orbit satellites like VUSat OSCAR-52,Fuji-OSCAR 29 (may or may not be
operational), AMSAT-OSCAR 7. During Field Day the transponders come alive like
20 meters on a weekend. The good news is that the transponders on these satellites will support multiple simultaneous contacts. The bad news is that you
can't use FM, just low dutycycle modes like SSB and CW.

The AMSAT Field Day 2012 event is open to all Amateur Radio operators. Amateurs are to use the exchange as specified in ARRL rules for Field Day. The AMSAT competition is to encourage the use of all amateur satellites, both analog and digital.

For the complete listing of the AMSAT Field Day Rules please refer to the documents posted on-line at:
http://www.amsatnet.com/fd2012.doc
http://www.amsatnet.com/fd2012.pdf

[ANS thanks AMSAT Director Contests and Awards, Bruce Paige, KK5DO for the above information]

NASA Extends Deadline for Student Summer Internships

College Level Internships Deadline Extended

NASA says they will continue accepting applications for college level summer internship positions among several NASA Centers around the country until March 16, 2012.

Students can view opportunities and apply for them all in one place. To start, the prospective student should go to:
http://intern.nasa.gov/ then Student Opportunities tab then select Internships which will bring you to the OSSI:SOLAR page describing the program.

Using the Search Tab on the OSSI:SOLAR page selecting Goddard in Maryland, Internship, Summer 2012, Engineering - Electrical Eng., or Engineering - Computer Eng., and a keyword search using "PICetSat" reveals an opportunity titled "PICetSat Module Development." which will develop a high-altitude balloon experiment module and related ground station components. This internship is open for Junior, Senior, and Masters level students. A description of this particular internship opportunity can be found at:
http://simsat.net/Internship-PICetSatModuleDevelopment-PKilroy.pdf

as sponsored by Pat Kilroy, N8PK, an AMSAT member and engineer at NASA in Greenbelt, Maryland.

High School Level Internships Applications Now Open

On February 1, NASA opened the application process for high school students to apply for a summer internship. The application page is at: https://education.gsfc.nasa-telophase.com/ The deadline for high school student applications is March 2, 2012.

Click on "Browse Available Projects" for students in the greater Maryland/DC/Northern Virginia area. An opportunity exists for a high school student/intern to also participate on the SimSat high-altitude balloon experiment sponsored by Pat Kilroy, N8PK. The direct link for this internship is:
http://tinyurl.com/NASA-PICetSat-Internship

The application process must be completed at the NASA intern web site. Students do not specify a specific internship program when they submit an application. The NASA Education community will determine which internship programs you are eligible for according to the information you provide in your application.

[ANS thanks NASA for the above information]

Successful ARISS Contact with El Dorado County Students

On Tuesday, January 24, on-orbit astronaut Dan Burbank, KC5ZSX participated in an ARISS contact with students from El Dorado County in Placerville, California.

The students, who came from several schools within the county, were able to get answers to many of their questions about space. Approximately 250 people were in attendance and another 160 watched as the contact was streamed over the internet. The radio connection was provided by telebridge station W6SRJ in California. The station, located on the campus of Santa Rosa Junior College (SRJC), hosted another 15 observers. In addition, the college sent a reporter and photographer from its newspaper, The Oak Leaf, to cover the event. The ARISS contact was part of a comprehensive education plan used to pique students' interest in Science, Technology, Engineering and Mathematics (STEM). More on the event, including video and photos may be found on the El Dorado County Web site.
See: http://general.edcoe.org/nasaqa/default.html

[ANS thanks Carol, KB3LKI, for the above information]

/EX

In addition to regular membership, AMSAT offers membership in the President's Club. Members of the President's Club, as sustaining donors to AMSAT Project Funds, will be eligible to receive addi-

tional benefits. Application forms are available from the AMSAT Office.

73,
This week's ANS Editor,
Lee McLamb, KU4OS

30. Weekly Highlights of Solar and Geomagnetic Activity, 30 January - 05 February 2012

Newsgroup: rec.radio.amateur.space
Date: 2012-02-07 23:00:15 UTC
From: SWPC.Webmaster@noaa.gov
Message-ID: <20120207230005.CC49933C6C@panix2.panix.com>
Source record: 180
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.dx,rec.radio.amateur.space,rec.radio.shortwave,rec.radio.info

```
:Product: Weekly Highlights and Forecasts
:Issued: 2012 Feb 07 2148 UTC
# Prepared by the US Dept. of Commerce, NOAA, Space Weather Prediction Center
# Product description and SWPC contact on the Web
# http://www.swpc.noaa.gov/weekly.html
#
# Weekly Highlights and Forecasts
#
Highlights of Solar and Geomagnetic Activity
30 January - 05 February 2012

Solar activity ranged from very low to low levels throughout the
period with two C-class flares observed. Region 1410 (N18, L=056,
class/area Cso/240 on 01 February) produced a C1 event at 0440Z on
30 January. The second event was also a C1 flare, at 0441Z on 01
February from Region 1408 (N06, L=132, Class/area Hax/120 on 21
January). Low level B-class activity dominated the remainder of the
period. As the summary period ended, there were only three spotted
regions on the visible disk, with Regions 1413 (N08, L=062,
class/area Csi/100) and 1410 the most pronounced.

The greater than 10 MeV proton event which began at 27/1905Z and
reached a maximum of 796 pfu on 28/0205Z, dropped below the 10 pfu
threshold and ended at 31/0635Z.

The greater than 2 MeV electron flux at geosynchronous orbit reached
high levels on 30 January at 1635Z. Predominantly background levels
prevailed with moderate levels observed from 03 - 04 February.

The geomagnetic field was at predominantly quiet to unsettled levels
during the past week. The geomagnetic field was quiet, until the
arrival of a glancing blow from the asymmetric halo CME that
occurred in association with the X1/1f flare on 27 January. The
transient passage was observed by the ACE spacecraft at 30/1554Z
with a solar wind speed increase from around 320 km/s to near 430
km/s. A weak sudden impulse measuring 8 nT was observed by the
Boulder magnetometer at 30/1624Z. The field increased to unsettled
levels following the shock but returned to quiet levels by 31/0000Z.
Quiet conditions prevailed on 31 January. On 01 February, a coronal
hole high speed stream became geoeffective with unsettled to minor
storm levels observed at high latitudes and predominantly quiet
levels observed at mid latitudes from 01 February through the end of
the summary period on 05 February.
```

Forecast of Solar and Geomagnetic Activity
08 February - 05 March 2012

Solar activity is expected to be at very low to low levels until 10 February, when old Region 1402 (N28, L=214) returns. An increase to low levels with a chance for M-class activity is expected as old Region 1402 transits the visible disk. A decrease to very low to levels is expected to prevail for the remainder of the period.

Energetic proton flux at geosynchronous orbit is expected to remain near background levels until old Region 1402 returns on 10 February. A slight chance exists for a proton event from 10 -24 February, as old Region 1402 transits the solar disk. A return to background levels is expected for the remainder of the period.

The greater than 2 MeV electron flux at geosynchronous orbit is expected to be at normal to moderate levels throughout the period.

The geomagnetic field is expected to remain at mostly quiet to unsettled levels through the forecast period. There is potential for active periods with isolated minor storm periods at high latitudes on 09-10 February, on 23 February, and again on 02-03 March, due to effects from coronal hole high speed wind streams.

31. apply me

Newsgroup: rec.radio.amateur.space
Date: 2012-02-09 13:51:00 UTC
From: anand <anandmurali678@gmail.com>
Message-ID: <b551f5ad-2713-44ea-a3cf-d7e2838bd20b@vh10g2000pbc.googlegroups.com>
Source record: 181

http://123maza.com/46/lucky959/

32. ANS-043 AMSAT News Service Weekly Bulletins

Newsgroup: rec.radio.amateur.space
Date: 2012-02-13 16:25:30 UTC
From: JoAnne Maenpaa <k9jkm@comcast.net>
Message-ID: <001701ccea6c$14648000$3d2d8000$@net>
Source record: 182
Cross-posted to: rec.radio.amateur.space,rec.radio.info

AMSAT NEWS SERVICE
ANS-043

ANS is a free, weekly, news and information service of AMSAT North America, The Radio Amateur Satellite Corporation. ANS reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in designing, building, launching and communicating through analog and digital Amateur Radio satellites.

Please send any amateur satellite news or reports to:

ans-editor@amsat.org

In this edition:
* AMSAT Fox-1 Cubesat Selected for NASA ELaNa Launch Collaboration
* Vega Launch on February 13 With Eight Amateur Band Cubesats
* ARISS Contact to Celebrate 50th Anniversary John Glenn Over Perth
* Open Mission Control Software for CubeSat Project Teams
* NASA astronaut Janice Voss, KC5BTK Passes
* SumbandilaSat SO-67 Amateur Transponder Recovery Work in Progress
* AMSAT Notes:
* International Space Station (ARISS) Status Report February 6, 2012

SB SAT @ AMSAT $ANS-043.01
ANS-043 AMSAT News Service Weekly Bulletins

AMSAT News Service Bulletin 043.01
From AMSAT HQ SILVER SPRING, MD.
February 12, 2012
To All RADIO AMATEURS
BID: $ANS-043.01

AMSAT Fox-1 Cubesat Selected for NASA ELaNa Launch Collaboration

Project ELaNa, NASA's "Educational Launch of NanoSat" managed by the Launch Services Program at the Kennedy Space Center, announced on February 10 that the AMSAT Fox-1 cubesat has been selected to join the program.

NASA will work with AMSAT in a collaborative agreement where NASA will cover the integration and launch costs of satellites deemed to have merit in support of their strategic and educational goals.

AMSAT teamed with the ARRL to write and deliver the 159 page educational proposal to NASA. Letters documenting the importance of AMSAT's

satellites in the education programs at the ARRL and also at the Clay Center for Science and Technology at the Dexter and Southfield schools in Brookline, MA, were important parts of our proposal.

AMSAT President Barry Baines, WD4ASW said, "The ELaNA Launch opportunity marks AMSAT's return to space after the conclusion of the successful ARISSat-1/KEDR flight. We need to get the flight Fox-1, along with an operational flight backup satellite, built, integrat- ed, tested, and delivered. Our ability to provide a spacecraft and get it launched is dependent upon the active support of our donors who wish to see Fox-1 fly."

AMSAT Vice-President of Engineering, Tony Monteiro, AA2TX noted this will provide a launch opportunity for AMSAT's next generation of FM repeater satellites with features and operation beyond the experience of AO-51. AMSAT's Fox-1 Engineering Team is making progress developing the advanced satellite that will provide these features:

+ Fox-1 is designed to operate in sunlight without batteries once the battery system fails. This applies lessons learned from AO-51 and ARISSat-1 operations.

+ In case of IHU failure Fox-1 will continue to operate its FM repeater in a basic, 'zombie sat' mode, so that the repeater remains on-the-air.

+ Fox-1 is designed as the immediate replacement for AO-51. Its U/V (Mode B) transponder will make it even easier to work with modest equipment.

+ From the ground user's perspective, the same FM amateur radio equipment used for AO-51 may be used for Fox-1.

+ Extending the design, Fox-2 will benefit from the development work of Fox-1 by adding more sophisticated power management and Software Defined Transponder (SDX) communications systems.

The Fox-1 Project presents an opportunity to literally put your call-sign on the Fox hardware. AMSAT is looking for major donations to help underwrite the cost of solar cells/panels, one of the more significant expenses of the project.

These solar cells are needed for the flight unit as well as for the a flight spare. As Fox-1 will have solar cells on all six sides of the spacecraft and given the relatively small surface area available on each side (at most 4" by 4" per side), AMSAT needs to invest in high efficiency solar cells to gain as much power as possible to operate the spacecraft.

Several opportunities to make your donation to keep amateur radio in space include:

+ Return the form sent with the letter to reply with your donation for the Fox-1 Project.

- All donations over $40 will receive a Fox pin.
- Donations of $120 or more qualify you for AMSAT President's Club

+ Call Martha at the AMSAT Office +1-888-FB AMSAT (1-888-322-6728)
+ Paypal donation widget on the main page at: http://www.amsat.org
+ Paypal donation widget for Project Fox at:
http://www.amsat.org/amsat-new/fox/
+ You can also go to the Paypal site and send your donation to
martha@amsat.org.
+ The AMSAT Store: http://www.amsat-na.com/store/categories.php

Project Fox web site provide a good overview of the technical progress
of the new satellite: http://www.amsat.org/amsat-new/fox/

[ANS thanks AMSAT President Barry Baines, WD4ASW, AMSAT Vice-President
of Engineering, Tony Monteiro, AA2TX and AMSAT's Project Fox Engineering
team for the above information]

ESA Vega Launch Includes 8 Amateur Band Satellites

Vega is scheduled to launch on February 13, at 1000 UTC with eight
student built amateur radio satellites. Internet video streaming of the
launch will be available at:
http://www.videocorner.tv/index.htm

The launcher will first deploy the main payload LARES, the Laser
relativity Spacecraft and will then make an additional firing of the
final OVUM stage before deploying the secondary cubesat payloads. The
planned timing for these deployments, in order of ejection, are as
follows:

= T0+ 4245.30secs 1st PPOD, with XatCobeo, e-st@r, and Goliat.
= T0+ 4255.30secs 2nd PPOD, with Robusta, MaSat-1 and PW-Sat.
= T0+ 4265.30secs 3rd PPOD, with UniCubeSat.
= T0+ 4275.30secs AlmaSat-1.

The Cubesats will not deploy their antennas until >1800 seconds after
they leave their PODS.It is not known how soon AlmaSat-1 will start
transmitting after deployment.

Vega Launch Cubesat Amateur Band Frequencies:
+ AlmaSat-1 437.465 MHz 1200 bps FSK, 2407.850 MHz
+ E-St@r 437.445 MHz 1200 bps AFSK
+ Goliat 437.485 MHz 1200 bpx AFSK
+ MaSat-1 437.345 MHz GFSK 625/1250 bps, CW
+ PW-Sat 435.020 MHz FM uplink, 145.990 MHz DSB downlink
+ Robusta 437.325 MHz 1200 bps FM telemetry
+ UniCubeSat 437.305 MHz 9600 bps FSK
+ XaTcobeo 437.365 MHz FFSK with AX.25

Links to the home pages of the satellite teams are included on the
http://www.amsat.org page. Extensive coverage of the launch and the

satellites can also be found on the AMSAT-UK web:
http://www.uk.amsat.org/

An ESA video of all of the satellites aboard the Vega Maiden Flight can be viewed on YouTube at: http://tinyurl.com/ESA-Vega-Cubesats

The university cubesat teams welcome reception reports. All observ- ers are invited to submit reports via amsat-bb and to also join the CubeSat Internet Relay Chat channel to pass on their news and com- ments in realtime. You will need an IRC client such as the ChatZilla addon for FireFox or mIRC to join the cubesat chat:

1. Connect to the irc.freenode.net server.
2. Once connected to the server the /join #cubesat command will bring you into the channel.
3. Many users set their chat nickname to "name_callsign".

ChatZilla AddOn for Firefox:
https://addons.mozilla.org/en-US/firefox/addon/chatzilla/

mIRC
http://www.mirc.com/

[ANS thanks the CubeSat Teams for the above information]

ARISS Contact to Celebrate 50th Anniversary John Glenn Over Perth

On the 20th of February 1962 a Mercury-Atlas 6 spacecraft called "Friendship 7" was launched. In the hot-seat was Astronaut, John Glenn. The objective was to place a man into earth orbit, observe his reactions to the space environment and safely return him to earth to a point where he could be readily found.

During the first orbit of three, the spacecraft came into radio range of the Muchea Tracking Station where the first Australian space radio contact was made by Gerry O'Connor who spoke with John Glenn as he passed overhead.

One of the questions that was posed for this flight was "Can you see the cities of Earth from space?" To help answer that question, the people of the City of Perth all turned their lights on as John Glenn flew over. The answer to the question was a resounding "YES!", and Perth was nicknamed "The City of Light".

Fifty years later on February 20, 2012 young people from Western Australia will have the chance to ask a question of an astronaut or cosmonaut currently residing on the International Space Station. There will be a live radio and video connection to the space station at the Northbridge Piazza in Perth, Western Australia. Ten lucky winners of the student competition, selected from primary and secon- dary schools, will get to ask questions, and receive their answers in real time as the space station flies overhead.

>From a technical perspective, ARISS will configure a direct amateur radio link between the ISS and ham operator, Dick Flagg, AH6NM, in Honolulu. In Perth, members of the Hills Amateur Radio Group will provide a phone link between AH6NM and Northbridge Piazza so the students can converse with the astronaut. Tony Hutchison, VK5ZAI, ARISS Mentor for Australia is conducting the behind the scenes preparation.

The event begins at 17:00PM Perth time (0900 UTC) on February 20. The currently scheduled contact time is approximately at 10:22 UTC, subject to last minute change depending upon events aboard the ISS or orbit changes.

In addition to the ARISS contact, web-streaming and other space activities such as a radio telescope, optical telescopes, museum exhibitions, an address by the Lord Mayor of Perth, a video message from John Glenn and a presentation by the Western Australia Chief Scientist are planned.

The press release of the City of Lights ARISS event, issued by the Government of Western Australia can be read on=line at:
http://tinyurl.com/WA-PressRelease

Web pages with more information of the event can be found at:
http://harg.org.au/ariss/
http://museum.wa.gov.au/city-lights

[ANS thanks Richard, G4TUT and David Jordan, AA4KN, ARISS Public Relations, Australia ARISS Coordinator Tony Hutchison, VK5ZAI for the above information]

Open Mission Control Software for CubeSat Project Teams

CubeSat developers may be interested in learning more about the Open Mission Control software, an open source, open access software for monitoring and controlling small spacecraft. The software is designed to provide an application and framework that can be adapted quickly and easily to support a variety of spacecraft including CubeSats, myPocketQubs and NanoLab experiments, and sounding rocket and high altitude balloon experiments. The team include students, space professionals, educators and enthusiasts from around the world, all working together to build a great mission control application for small spacecraft projects.

The Open Mission Control framework consists of the application and graphical user interface which contain the basic structure of the program, and the Open Mission Control toolbox, which provides a number of ready to use functions typically required for mission control applicationa.

The Open Mission Control application and graphical user interface can be adapted to a project quickly and easily, by populating them with elements from the Open Mission Control toolbox and other stan- dard

library elements. This approach allows also users with limited programming experience to create sophisticated mission control software by building on a solid basic implementation.
Use and verification.

Designed to work with any spacecraft project, the first flight mis- sion that is expected to use Open Mission Control is myPocketQub 442. myPocketQub 442 was selected to fly as a pocket spacecraft attached to UKube-1, the first United Kingdom Space Agency CubeSat. It is expected to be the first mission controlled by Open Mission Control and to demonstrate and verify various use cases:

+ The first use case is for professional monitoring, command and control of a real spacecraft.

+ The second use case involves schools and universities using Open Mission Control to upload their virtual payloads for their OpenSpace365 projects, monitor their experiments as they run and download the data for analysis.

+ The third use case involves the use of Open Mission Control as monitoring software for the various scientific and engineering sub-payloads that will fly on myPocketQub 442. The students conducting these experiments will use Open Mission Control to access and store the data from these payload experiments for analysis and research.

+ The fourth use case is communication with engineering models of the real spacecraft which will be made available on the Internet. These engineering models are duplicates of the flight hardware and allow Open Mission Control to command and monitor them and their sub-payloads in real time and to simulate different critical mission phases under real conditions.

Additional information and links are available on the Open Mission Control webpage at: http://openmissioncontrol.wordpress.com/

[ANS thanks the Open Mission Control Team for the above information]

NASA astronaut Janice Voss, KC5BTK Passes

NASA astronaut Janice Voss passed away from cancer overnight. One of only six women who have flown in space five times, Voss' career was highlighted by her work and dedication to scientific payloads and exploration. Janice supported SAREX during her flights on the Space Shuttle. She was a phone-in speaker during one of AMSAT's multi-media Dayton Forum presentations with Roy Neal as MC. Janice held the call sign KC5BTK.

Voss began her career with NASA in 1973 while a student at Purdue University. She returned to NASA in 1977 to work as an instructor, teaching entry guidance and navigation to space shuttle crews. After

completing her doctorate in 1987, she worked within the aerospace industry until she was selected as an astronaut in 1990.

Voss' first spaceflight mission was STS-57 in 1993, the first flight of the Spacehab module. She next flew on STS-63 in 1995, a mission to the Mir space station, and third flight of Spacehab. She also flew as a payload commander on STS-83 in 1997 with the Microgravity Science Laboratory, but the mission was cut short due to problems with one of the orbiter's three fuel power generation units. Voss, the crew and MSL flew again as the STS-94 MSL-1 Spacelab mission, focused on materials and combustion science research in microgravity.

Her last mission was STS-99 in 2000, a flight to the International Space Station as part of the Shuttle Radar Topography Mission which mapped more than 47 million square miles of the Earth's land surface.
In total, Voss spent more than 49 days in space.

Peggy Whitson, chief of the Astronaut Office said, "By improving the way scientists are able to analyze their data, and establishing the experimental methods and hardware necessary to perform these unique experiments, Janice and her crew ensured that our space station would be the site of discoveries that we haven't even imagined."

For Voss' complete biography, please visit:
http://www.jsc.nasa.gov/Bios/htmlbios/voss-jan.html

[ANS thanks Frank Bauer, KA3HDO and SpaceRef.com for the above information]

SumbandilaSat SO-67 Amateur Transponder Recovery Work in Progress

It would appear that prior reports on the demise of South Africa's SumbandilaSat were 'greatly exagerated' (with apologies to author Mark Twain).

A report on the Southern African AMSAT website says partial recov- ery is possible for Amateur Radio Operation to possibly resume in March 2012.

"We have not given up on our efforts to get SumbandilaSat working again even if it is only partially", said Johan Lochner ZR1CBC who is spending much time on the recovery process and many nights burn- ing the midnight oil working on new and more intelligent algorithms.
He and his colleagues are making every effort to get the satellite working again.

SumbandilaSat experienced a corruption in the programme memory of one of the power switches. This is the interface unit which con- trols a robust orientation control implementation system which is using output from the magnetic sensors to point the solar panels to- wards the sun in a safe mode scenario when for example communica- tions with the ground segment was not possible for a few days.

The corruption of the program memory prevented the magnetic inter- face unit from automatically switching on after power-up and thus preventing access to measurements taken by the magnetometer.

Johann said, "As a result of the malfunction of the magnetic control unit the satellite started to slowly point away from the sun with intermittent sun eclipses. When there was no power flowing from the solar cells the batteries drained and we could not in a safe way communicate with the satellite, so we backed off. Once we determined this pattern we stopped communicating with the satellite when we did not see sufficient charge on the batteries. At other times we had good communication when could diagnose what was going on. Dur- ing good communication windows that could last 2 or 3 days we tried to diagnose the exact nature of the problem in the same way as we had done before and we started to implement a fix. The particular power switch that failed was already the redundant one so we were in a worse state than before."

SumbandilaSat controllers implemented automated ground segment soft- ware to make contact with the satellite from both SANSA Space Opera- tions and the Electronic Systems labs at SU. The objective was to contact the satellite automatically and to try to implement the recovery procedure and also notify the team if any contact was made.

Johann continued, "By mid-November 2011 we again made contact with SumbandilaSat and set in place a planned recovery procedure. Within 3-4 days we came to the conclusion that the main battery had failed. Earlier the intermittent contact was because the battery could not be fully charged and that satellite power bus was too low for the processors and transmitter to function. We surmised that during the month that we had no contact that the battery must have gone open circuit. With the battery no longer on the power bus, the voltage on the bus would rise to 28.5 volts and supply enough current to support operations when SumbandilaSat was in full sunlight."

The SumbandilaSat concludes, "We are determined to get this working and to maintain the scientific value of the satellite as much as possible. Johann's focus is now on getting the amateur radio trans- ponder working, which with the loss of AO-51 will be a great asset to amateur radio satellite activity. By the end of February we hope to achieve this!"

Uplink: 145.875 MHz (no tone required)
Downlink: 435.345 MHz

See: http://www.amsatsa.org.za/SumbandilaSat.htm for full coverage of this news.

[ANS thanks SA AMSAT and Johan Lochner, ZR1CBC for the above information]

AMSAT Notes:

AMSAT Fox Project Flyer

Patrick Stoddard, WD9EWK has put together a nice 4 page pdf description of the Fox project. This is available directly from this URL: http://www.amsat.org/amsat-new/fox/AMSAT_Fox-20120206.pdf or the link can be found midway down the Fox page on the AMSAT Web site.
More detailed information about the Fox project can be found in the Fox area of the AMSAT Web site.

AMSAT Annual Meeting dates set

The 2012 AMSAT Annual Meeting and Symposium will be held Oct 26-28,2011 at the Holiday Inn Orlando Airport. More details as they become available.

AMSAT at Dayton 2012

The AMSAT Dayton team is busy preparing for the AMSAT presence at this years Hamvention - May 18-20, 2012. Same booth spaces next the the ARRL area, outdoor satellite demonstration area and it looks like the AMSAT Forum will be Saturday morning. Additional information and web site area soon.

[ANS Thanks Gould, WA2SXM, for this information]

Amateur Radio on the International Space Station (ARISS) Status Report
February 6, 2012

1. Upcoming School Contacts

An Amateur Radio on the International Space Station (ARISS) contact was successful for Inuksuk High School, Iqaluit, Nunavut, Canada on Wednesday, February 8 at 15:18 UTC via telebridge station AH6NM in Hawaii. The school has formed a space club through which students are learning about the ISS via videos, the internet and guest speakers. They are learning how to track the ISS and are completing space-related projects. Radio usage and protocol have been discussed. First Air and the Makivik Corporation are the sponsors that ensure ARISS contacts are supported in the remote areas of Northern Canada.

Soumuta Elementary School, located in Kagoshima, Japan scheduled for an Amateur Radio on the International Space Station (ARISS) contact on Saturday, February 11 at 10:33 UTC was successful. The school was established in 1972 and has a current enrollment of 479 students. Students are learning about the mission of the ISS and will experience amateur radio concepts through their contact.

2. Polish Students Experience Successful ARISS Contact

On Saturday, February 4, students attending the Zespol Szkol nr 8 in Walbrzych, Poland participated in an Amateur Radio on the International Space Station (ARISS) contact with Don Pettit, KD5MDT on the ISS. Radio

station W6SRJ in California provided the telebridge connection. Greetings were exchanged and students were able to get through all the space-related questions they had prepared. The contact was integrated into a curriculum covering electronics, microprocessor systems and English and drew interest from the school's robotics and amateur radio clubs. Contact audio was fed into EchoLink and IRLP (Internet Radio Linking Project). Representatives from radio and television stations provided media coverage.

3. ARISS-U.S. to Review Proposals Submitted

The NASA Teaching From Space office received over 100 inquiries about the U.S. proposal process for ARISS contacts that will be scheduled during the July 2012 - January 2013 time frame. Twenty-three schools met the January 30 deadline and submitted proposals. The next step is for the U.S. Selection Committee to review the proposals and select the U.S. schools in about one month. Another window of opportunity for U.S. schools and organizations to submit proposals will open later in the year.

4. AMSAT News Service on ARISS

The February 5 AMSAT (Radio Amateur Satellite Corporation) News Service bulletin (ANS-036) included an item about the successful amateur radio satellite, SuitSat, titled, "Remembering Mr. Smith - SuitSat-1 February 3, 2006." Another piece covered the recent ARISS contact with El Dorado County students. To view the articles, see:
http://amsat.org/pipermail/ans/2012/000589.html

5. Amateur Radio Newsline Covers ARISS

On February 3, Amateur Radio Newsline posted the winners of the ARISSat Chicken Little Contest in its report #1799. To read, "Ham Radio in Space: Winners of ARISSat-1 Chicken Little Contest Announced," see:
ftp://ftp.arnewsline.org/quincy/News/news.txt

/EX

In addition to regular membership, AMSAT offers membership in the President's Club. Members of the President's Club, as sustaining donors to AMSAT Project Funds, will be eligible to receive additional benefits. Application forms are available from the AMSAT Office.

73,
This week's ANS Editor,
Dee Interdonato, NB2F

33. Weekly Highlights of Solar and Geomagnetic Activity, 06 - 12 February 2012

Newsgroup: rec.radio.amateur.space
Date: 2012-02-14 23:00:08 UTC
From: SWPC.Webmaster@noaa.gov
Message-ID: <20120214230003.32F6733C3C@panix2.panix.com>
Source record: 183
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.dx,rec.radio.amateur.space,rec.radio.shortwave,rec.radio.info

```
:Product: Weekly Highlights and Forecasts
:Issued: 2012 Feb 14 2216 UTC
# Prepared by the US Dept. of Commerce, NOAA, Space Weather Prediction Center
# Product description and SWPC contact on the Web
# http://www.swpc.noaa.gov/weekly.html
#
# Weekly Highlights and Forecasts
#
Highlights of Solar and Geomagnetic Activity
06 - 12 February 2012

Solar activity began the week at moderate levels due to an M1/Sf
flare produced by Region 1410 (N18, L=056, class/area Cso/240 on 01
February) at 06/2000 UTC. Activity levels decreased to very low to
low levels for the remainder of the week. Noteworthy events include
a long duration C7 limb event from Region 1410 at 07/2219 UTC, and a
CME associated with a filament eruption at 10/1154 UTC. Region 1410
produced a long duration C7 limb event at 07/2219 UTC.

No proton events were observed at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit started
the period at normal background levels, increased to moderate levels
on 07 February, and reached high levels on 08-09 February. The
electron flux returned to moderate levels for the remainder of the
period.

The geomagnetic field was at mostly quiet levels for the majority of
the period. There were a few periods of unsettled to active
conditions at mid-latitudes with active to minor storm conditions at
high latitudes, early in the week on 7 and 8 February. This activity
was associated with solar wind speeds between 450-500 km/s and
periods of southward Bz. Mid-day on 09 February, unsettled to active
periods were observed at high latitudes due to the arrival of a
co-rotating interaction region followed by a weak coronal hole high
speed stream. From late on 09 February until the end of the period,
mostly quiet conditions prevailed.

Forecast of Solar and Geomagnetic Activity
15 February - 12 March 2012

Solar activity is expected to be low with a slight chance of M-class
activity until Region 1419 rotates off the visible disk on 26
February. Very low to low levels are expected to prevail for the
remainder of the period.
```

No proton events are expected at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit is expected to be at low to moderate levels.

Geomagnetic field activity is expected to be at mostly quiet levels throughout the period, with the exception of any currently unanticipated future CME events. Increased field activity due to recurrent disturbances is expected on 18-19 February, 23 February, 2-3 March, and 7 March.

** Attention** Beginning Monday, March 12, 2012, the Weekly bulletin will now be issued and available on the SWPC web page every Monday morning by 1500 UTC.

34. hai dear darling this is special gift for u da

Newsgroup: rec.radio.amateur.space
Date: 2012-02-15 07:43:12 UTC
From: anu rasi <anurasi63@gmail.com>
Message-ID: <7b751e61-3a3d-4a63-afdf-93da000853c2@jn12g2000pbb.googlegroups.com>
Source record: 184

http://123maza.com/46/plant958/

35. WSR-045 AMSAT Weekly Satellite Report

Newsgroup: rec.radio.amateur.space
Date: 2012-02-15 13:59:27 UTC
From: JoAnne Maenpaa <k9jkm@comcast.net>
Message-ID: <000901ccebe9$dfc356d0$9f4a0470$@net>
Source record: 185
Cross-posted to: rec.radio.amateur.space,rec.radio.info

```
This report is organized into four (4) parts.
Part 1 (S1) - operational analog amateur satellites
Part 2 (S2) - operational digital amateur satellites
Part 3 (S3) - non - operational satellites
Part 4 (S4) - deborbited/returned satellites

SB SAT @ AMSAT W8ISS $WSR-045.S1
WSR 045 Part 1 02/14/2012

AMSAT NEWS SERVICE BULLETIN 045.S1
FROM AMSAT HQ SILVER SPRING, MD, February 14, 2012
TO ALL RADIO AMATEURS
BID: $WSR-045.S1

DO-64 Delfi-C3
Catalog number: 32789
Launch Date: April 28, 2008 0354z
Launch site: Satish Dhawan Space Centre, India

Status: Operational
Current Mode: Science Mode - Beacon ONLY

Telemetry: 145.870 MHz

Downlink: 145.880 to 145.920 MHz
Uplink: 435.530 to 435.570 MHz

Delfi-C3 web page: http://www.delfic3.nl/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnumh
[02092011]
��VO-52 HAMSAT
Catalog number: 28650
Launch Date: May 05, 2005 0444z
Launch site: Satish Dhawan Space Centre, India

Status: Operational
Current Mode: U/v - Indian Transponder

Frequencies:
Indian Transponder:
Uplink: 435.220 to 435.280 MHz LSB/CW
Downlink: 145.930 to 145.870 MHz USB/CW

Dutch Transponder:
Uplink: 435.225 to 435.275 MHz LSB/CW
```

Downlink: 145.925 to 145.875 MHz USB/CW

Indian Beacon: 145.9360 MHZ CW
Dutch Beacon: 145.860 MHz 12WPM with CW message

Mode and Antenna Polarization:
V: LHCP
U: RHCP

Official Webpage: http://www.amsatindia.org/hamsat.htm

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum0

To know what transponder is switched on please listen for the beacon
that is active. Each transponder has a different beacon.
[02092011]
��SO-50 SAUDISAT-1C
Catalog number: 27607
Launch date: December 20, 2002 1700z
Launch site: Baikonur, Kazakhstan

Status: Operational

Current Mode: V/u

Uplink: 145.850 MHz FM - 67.0 Hz PL tone
Downlink: 436.795 MHz

Mode and Antenna Polarization:
V: Linear
U: Linear

Official Webpage: http://saudisat.kacst.edu.sa/index.shtml
(not up and running currently)

To switch the transmitter on, you need to send a CTCSS tone of 74.4
Hz. The order of operation is thus: (allow for Doppler as necessary):
1) Transmit on 145.850 MHz with a tone of 74.4 Hz to arm the 10 minute
timer on board the spacecraft.
2) Now transmit on 145.850 MHz (FM Voice) using 67.0 Hz to PT the re-
peater on and off within the 10 Minute window.
3) Sending the 74.4 tone again within the 10 minute window will reset
the 10 minute timer.
[02092011]
��FO-29 JAS-2
Catalog number: 24278
Launch Date: August 17, 1996

Status: Operational
Current Mode: V/u (Mode JA)

Voice/CW (Mode JA)
Uplink: 145.90 to 146.00 MHz CW/LSB

Downlink: 435.80 to 435.90 MHz CW/USB
Beacon: 435.795 MHz

Digital Mode JD
Uplinks: 145.850 MHz FM
145.870 MHz FM
145.910 MHz FM
Downlink: 435.910 MHz 1200-baud BPSK or 9600-baud FSK
Callsign: 8J1JCS
Digitalker: 435.910 MHz

Mode and Antenna Polarization:
V: RHCP
U: RHCP

For current operational schedule for FO-29:
http://www.ne.jp/asahi/m-arai/gkz/satinfo/fo29e.htm

JARL English webpage:
http://www.jarl.or.jp/English/5_Fuji/ejasmenu.htm

AMSAT-NA Webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID
�retURL�atellites/status.php

Mineo Wakita, JE9PEL, has created a simple decoder program for FO29's
CW telemetry downlink: http://www.ne.jp/asahi/hamradio/je9pel/
fo29cwts.htm
[01122012]
��AO-27 AMRAD
Catalog number: 22825
Launch date: September 26, 1993 0140z
Launch site: Kourou, French Guiana

Status: Operational

Current Mode: V/u

Uplink: 145.850 MHz FM
Downlink: 436.797 MHz FM

Mode and Antenna Polarization:
V: Linear
U: Linear

Official Webpage: http://www.ao27.org
[02092011]
��AO-7 AMSAT OSCAR 7
Catalog number: 07530
Launch Date: November 15, 1974
Launch site: Vandenberg AFB, California, USA

Status: Operational

Current Mode: Alternating between Mode A and B every 24 hours

Uplink: 145.850 to 145.950 MHz CW/USB Mode A
432.125 to 432.175 MHz CW/LSB Mode B
Downlink: 29.400 to 29.500 MHz CW/USB Mode A (1W PEP)
145.975 to 145.925 MHz CW/USB Mode B (8W PEP)
145.975 to 145.925 MHz CW/USB Mode C (2W PEP)
Beacons: 29.502 MHz CW
145.972 MHz CW
435.100 MHz CW
2304.100 MHz CW

Official Webpage:
http://www.amsat.org/amsat-new/satellites/sat_summary/ao7.php

The AO-7 Logbook and Resource Website:
http://www.planetemily.com/ao7/
[02092011]
��INTERNATIONAL SPACE STATION (ISS) - ARISS
Catalog number: 25544
Launch date: November 20, 1998 0640z (ZARYA module)
Launch sites: Baikonur, Kazakhstan
Kourou, French Guiana
Uchinoura Space Center, Japan
Kennedy Space Center, Titusville, Florida, USA

Status: Operational

Current Active Modes: FM Repeater - OFF
Voice - V/v
BBS - OFF
2m APRS - ON
70cm Digi - ON
SSTV - OFF

Expedition 30 Crew (November 2011 - March 2012):
Commander: Dan Burbank KC5ZSX
Flight Engineer: Anton Shkaplerov
Flight Engineer: Anatoly Ivanishin
Flight Engineer: Oleg Kononenko RN3DX
Flight Engineer: Andr� Kuipers PI9ISS
Flight Engineer: Don Pettit KD5MDT

Available Modes and Frequencies:
Digital/APRS:
Worldwide 2m packet uplink: 145.825 MHz FM 1k2
Worldwide 2m packet downlink: 145.825 Mhz FM 1k2
Worldwide 70cm packet downlink: 437.550 Mhz FM 1k2
Worldwide 70cm packet downlink: 437.550 Mhz FM 1k2

Voice:
Region 1 voice uplink: 145.200 MHz FM
Region 2/3 voice uplink: 144.490 MHz FM

Worldwide downlink: 145.800 MHz FM

Crossband Repeater:
Repeater Uplinks: 1269.650 MHz FM
437.800 MHz FM
145.990 MHz FM - 67.0 PL (Kenwood)
Repeater Downlink: 145.800 MHz FM
437.800 MHz FM (Kenwood)

SSTV Robot 36:
Downlink: 145.800 MHz FM

Mode and Antenna Polarization:
V: Linear
U: Linear

Callsigns:
Belgian: OR4ISS
German: DP0ISS
Russian: RS0ISS
RZ3DZR
United States: NA1SS
2m Packet Mailbox: RS0ISS-11
2m Digipeater alias: ARISS
70cm Packet Mailbox: RS0ISS-1
70cm Digipeater callsign: RS0ISS
70cm Digipeater alias: ARISS

Official ARISS Webpage: http://www.rac.ca/ariss
ISS Fan Club Webpage: http://www.issfanclub.com
APRS tracking page: http://www.ariss.net/

ISS Daily Crew Schedule: http://spaceflight.nasa.gov/station/timelines
Remember that the crew operates on UTC time. Also, all of the time
line is NOT translated from Russian and posted.
[12262011]
NNNN
/EX

SB SAT @ AMSAT W8ISS $WSR-045.S2
WSR 045 Part 2 02/14/2012

AMSAT NEWS SERVICE BULLETIN 045.S2
FROM AMSAT HQ SILVER SPRING, MD, February 14, 2012
TO ALL RADIO AMATEURS
BID: $WSR-045.S2

XaTcobeo
Catalog Number:
Launch Date: Febrauary 13, 2012
Launch Site: Kourou, French Guiana

Status: On Orbit

Uplink:
Downlink: 437.365 MHz FFSK with AX.25

Beacon:

Callsign:

URL:

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum5
[02142012]
��UniCubeSat
Catalog Number:
Launch Date: Febrauary 13, 2012
Launch Site: Kourou, French Guiana

Status: On Orbit

Uplink:
Downlink: 437.305 MHz 9k6 bps FSK

Beacon:

Callsign:

URL:

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum3
[02142012]
��Robusta
Catalog Number:
Launch Date: Febrauary 13, 2012
Launch Site: Kourou, French Guiana

Status: On Orbit

Uplink:
Downlink: 437.325 MHz 1k2 FM telemetry (data every 1 min, 20 sec. burst)

Beacon:

Callsign:

URL:

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum2
[02142012]
��PW-Sat
Catalog Number:
Launch Date: Febrauary 13, 2012
Launch Site: Kourou, French Guiana

Status: On Orbit

Uplink: 435.020 MHz FM
Downlink: 145.900 MHz DSB

Beacon:

Callsign:

URL:

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum2
[02142012]
��MaSat-1
Catalog Number:
Launch Date: Febrauary 13, 2012
Launch Site: Kourou, French Guiana

Status: On Orbit

Uplink:
Downlink: 437.345 MHz GFSK 625/1250 bps
437.345 MHz CW

Beacon:

Callsign:

URL:

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum6
[02142012]
��Goliat
Catalog Number:
Launch Date: Febrauary 13, 2012
Launch Site: Kourou, French Guiana

Status: On Orbit

Uplink:
Downlink: 437.485 MHz 1k2 AFSK

Beacon:

Callsign:

URL:

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum�
[02142012]
��E-St@r
Catalog Number:
Launch Date: Febrauary 13, 2012
Launch Site: Kourou, French Guiana

Status: On Orbit

Uplink:
Downlink: 437.445 MHz 1k2 bps AFSK

Beacon:

Callsign:

URL:

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum0
[02142012]
��ALMASat-1
Catalog Number:
Launch Date: Febrauary 13, 2012
Launch Site: Kourou, French Guiana

Status: On Orbit

Uplink:
Downlink: 437.465 MHz 1k2 bps FSK
2407.850 MHz

Beacon:

Callsign:

URL:

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum9
[02142012]
��RS-39 Chibis-M
Catalog Number: 37841
Launch Date: October 30, 2011 10:11:00 UTC
Launch site: Tyuratam (Baikonur Cosmodrome), Kazakhstan

Status: Operational

Uplink:
Downlink:

Beacon: 435.315 MHz CW
435.215 MHz CW

Callsign:

URL:

IARU coordination status page:
[01122012]
��JUNGU
Catalog Number: 37841
Launch Date: October 12, 2011 05:30:00 UTC

Launch site: Satish Dhawan Space Centre, India

Status: On Orbit

Uplink: 145.??? MHz 1k2 (mode?)
Downlink: 437.505 MHz 9k6 (mode?)

Beacon: 437.275 MHz 15 wpm (?) CW

Callsign:

URL: http://www.iitk.ac.in/me/jugnu/index.htm

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum0
[01122012]
��SRMSAT
Catalog Number: 37839
Launch Date: October 12, 2011 05:30:00 UTC
Launch site: Satish Dhawan Space Centre, India

Status: On Orbit

Uplink: 145.900 MHz 1k AX.25 (speed?)
Downlink: 437.500 MHz 2k4 AX.25

Beacon: 437.425 MHz 12 wpm CW

Callsign:

URL: http://srmsat.in/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum1
[01122012]
��HRBE (E1P Explorer 1 [Prime] CubeSat (E1P-U2))
Catalog Number: 37855
Launch Date: October 28, 2011
Launch site: Vandenberg Air Force Base, California, USA

Status: On Orbit

Uplink: 437.305 MHz (???)
Downlink: 437.505 MHz AX.25 (SSB?)

Beacon:

Callsign:

URL: http://ssel.montana.edu/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum6
[01122012]
��M-Cubed

Catalog Number: 37855
Launch Date: October 28, 2011
Launch site: Vandenberg Air Force Base, California, USA

Status: On Orbit

Uplink:
Downlink: 437.485 MHz AX.25

Beacon:

Callsign:

URL: http://umcubed.org/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum!5
[01122012]
��RAX-2
Catalog Number: 37853
Launch Date: October 28, 2011
Launch site: Vandenberg Air Force Base, California, USA

Status: On Orbit

Uplink:
Downlink: 437.345MHz 9k6 GMSK

Beacon:

Callsign:

URL: http://rax.engin.umich.edu//

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum"1
[12262011]
��AO-71 AubieSat-1
Catalog Number: 37854
Launch Date: October 28, 2011
Launch site: Vandenberg Air Force Base, California, USA

Status: On Orbit

Uplink:
Downlink: 437.475 MHz 1k2 AX.25

Beacon: 437.475 MHz CW

Callsign: KI4NQO

URL: http://www.space.auburn.edu/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum8

[12262011]
��O/OREOS
Catalog Number: 37224
Launch Date: November 20, 2010
Launch site: Kodiak Launch Complex, Alaska, USA

Status: On Orbit

Uplink:
Downlink: 437.035 MHZ AX.25

Beacon:

Callsign:

URL: http://www.ooreos.org/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum6
[02092011]
��Rax-1 Radio Aurora Explorer
Catalog Number: 37223
Launch Date: November 20, 2010
Launch site: Kodiak Launch Complex, Alaska, USA

Status: On Orbit

Uplink:
Downlink: 437.505 MHz 9k6 GMSK

Beacon:

Callsign: RAX-1

URL: http://rax.engin.umich.edu/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum5
[02092011]
��FO-69 Fastrac-1 Sara Lily
Catalog Number: 37227
Launch Date: November 20, 2010
Launch site: Kodiak Launch Complex, Alaska, USA

Status: Operational

Uplink 1: 145.980 MHz 1k2 baud
Uplink 2: 145.825 MHz 1k2 baud
Downlink: 437.345 MHz 1k2 and 9k6 baud

Beacon: 437.435 MHz 1k2 AX.25

Callsign: Fast1

URL: http://fastrac.ae.utexas.edu/index.php

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=
[07052011]
==FO-70 Fastrac-2 Emma
Catalog Number: 37380
Launch Date: November 20, 2010
Launch site: Kodiak Launch Complex, Alaska, USA

Status: Operational

Uplink 1: 435.025 MHz 1k2 baud
Uplink 2: 437.435 MHz 9k6 baud
Downlink: 145.825 MHz 1k2 and 9k6 baud

Beacon: 145.825 MHz 1k2 AX.25

Callsign: Fast2

URL: http://fastrac.ae.utexas.edu/index.php

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=
[12162011]
==StudSat
Catalog Number: 36796
Launch Date: July 12, 2010 0352z
Launch site: Satish Dhawan Space Centre, India

Status: On Orbit

Uplink: 437.505MHz, 9600bps FSK
Downlink: 437.505MHz, 9600bps FSK
Beacon : 437.505MHz, 20bps ASK

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum4
[02092011]
==TIsat-1
Catalog Number: 36799
Launch Date: July 12, 2010 0352z
Launch site: Satish Dhawan Space Centre, India

Status: On orbit

Callsign: HB9DE

Uplink: 145.980MHz FM, AFSK
Downlink: 437.305MHz FM, AFSK
Beacon: 437.305MHz CW

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum8
[02092011]
==SwissCube
Catalog Number: 35932

Launch Date: September 23, 2009 0621z
Launch site: Satish Dhawan Space Centre, India

Status: Operational

Callsign: HB9EG

Beacon(100mw): 437.5050MHz CW
Beacon(1w): 437.5050MHz FSK 1k2bps

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum9
[02092011]
��UWE-2
Catalog Number: 35934
Launch Date: September 23, 2009 0621z
Launch site: Satish Dhawan Space Centre, India

Status: In Orbit

Beacon(500mw): 437.3850 MHz AFSK 1k2bps
437.3850 MHz FSK 9k6bps

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum0
[02092011]
��ITUpsAT1
Catalog Number: 35935
Launch Date: September 23, 2009 0621z
Launch site: Satish Dhawan Space Centre, India

Status: Operational

Beacon(100mw): 437.325MHz CW
Beacon(1w): 437.325MHz 19k2bps

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum3
[02092011]
��BEESAT
Catalog Number: 35933
Launch Date: September 23, 2009 0621z
Launch site: Satish Dhawan Space Centre, India

Status: Operational

Callsign: DP0BEE

Beacon(100mw): 436.000MHz CW
Beacon(500mw): 436.000MHz GMSK 4k8bps
Beacon(500mw): 436.000MHz GMSK 9k6bp
[02092011]
��CP-6
Catalog Number: 35004

Launch Date: May 19, 2009 2355z
Launch site: Wallops Island, Virginia, USA

Status: Operational

Downlink: 437.365 MHz 1k2 AFSK

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum1
[01122012]
��HAWKSAT 1
Catalog number: 35003
Launch Date: May 19, 2009 2355z
Launch site: Wallops Island, Virginia, USA

Status: operational

Downlink: 437.345 MHz ?

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum5
[01122012]
��Pharmasat
Catalog Number: 35002
Launch Date: May 19, 2009 2355z
Launch site: Wallops Island, Virginia, USA

Status: Operational

Downlink: 437.465 MHz 1k2 AFSK

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum�
[02092011]
��ANUSAT
Catalog Number: 34808
Launch Date: April 20, 2009 0115z
Launch Site: Satish Dhawan Space Centre, India

Status: ?

Downlink: 435.000 MHz
Uplink: 145.800 MHz

Telemetry: 137.400 MHz
[02092011]
��SOHLA-1 (ASTRO TECH.)
Catalog Number: 33496
Launch Date: January 23, 2009 0354z
Launch site: Tanegashima Space Center, Japan

Status: Operational

Proposed Frequencies and Modes:
Downlink: 437.505 MHz AFSK/CW
Beacon: 437.505 MHz AFSK/CW

Callsign:

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum1
[02092011]
��KAGAYAKI (Solan Co.)
Catalog Number: 33495
Launch Date: January 23, 2009 0354z
Launch site: Tanegashima Space Center, Japan

Status: In Orbit

Downlink: 437.375 MHZ FSK9k6/CW
Beacon: 437.375 MHz FSK9k6/CW

IARU coordination status page:

AMSAT-NA webpage:

[02092011]
��STARS (Kagawa Univ.) (Twin Satellites)
Catalog Number: 33498
Launch Date: January 23, 2009 0354z
Launch site: Tanegashima Space Center, Japan

Status: Operational ?

Downlinks: 437.485 MHz FM/CW
437.465 MHz FM/CW
Beacons: 437.305 MHz FM/CW
437.275 MHz FM/CW

Callsigns: JR5YBN
JR5YBO

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum�

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID1&retURL
�atellites/status.php
[02092011]
��KKS-1 (Tokyo MCIT)
Catalog Number: 33499
Launch Date: January 23, 2009 0354z
Launch site: Tanegashima Space Center, Japan

Status: Operational

Downlink: 437.455 MHz AFSK/CW
Beacon: 437.385 MHz AFSK/CW

Callsign: JQ1YYY

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum7

AMSAT-NA webapge:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID0&retURL
�atellites/status.php
[20092011]
��PRISM (Tokyo Univ.)
Catalog Number: 33493
Launch Date: January 23, 2009 0354z
Launch site: Tanegashima Space Center, Japan

Status: Operational ?

Downlink: 437.425 MHz AFSK/GMSK/CW
Beacon: 437.250 MHz AFSK/GMSK/CW

Callsign: JQ1YCX

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum�

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID9&retURL
�atellites/status.php
[02092011]
��RS-30 Radio Sputnik 30 (Yubileiny)
Catalog Number: 32953
Launch Date: May 23, 2008 1520z
Launch site: Plesetsk Missile and Space Complex, Russia

Status: Operational

Curent Modes: Telemetry
Audio
Images

Downlinks: 435.315 MHz
435.215 MHz

AMSAT-NA website:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID5&ret
URL�atellites/status.php

Official website:
http://www.npopm.com/?cid�oca&caidC
[02092011]
��CanX-2
Catalog number: 32790
Launch Date: April 28, 2008 0354z
Launch site: Satish Dhawan Space Centre, India

Status: Operational in range of ground station only

Downlink: 437.478 MHz GFSK

For the latest project status update please visit the Can X-2 web
page: http://www.utias-sfl.net/nanosatellites/CanX2/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnumF
[02092011]
��AAUSAT-II
Catalog number: 32788
Launch Date: April 28, 2008 0354z
Launch site: Satish Dhawan Space Centre, India

Status: Operational

Downlink: 437.425 MHz 1k2 baud packet

For the latest project status update please visit the AAUSAT-II web
page:
http://www.aausatii.aau.dk/homepage/index.php?language&page&me

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum`
[02092011]
��CO-65 CUTE-1.7+APD II
Catalog number: 32785
Launch Date: April 28, 2008 0354z
Launch site: Satish Dhawan Space Centre, India

Status: Operational ?

Downlink: 437.475 MHz 9k6 Packet
Uplink: 1267.600 Mhz

Telemetry Beacon:
Downlink: 437.2750 MHz CW

For the latest project status update please visit the Cute-1.7+APD II
web page: http://lss.mes.titech.ac.jp/ssp/cute1.7/index_e.html

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnumx

Command Station blog website:
http://lss.mes.titech.ac.jp/ssp/cute1.7/blog/

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID2&retURL
atellites/status.php
[07052011]
��Compass-1
Catalog number: 32787
Launch Date: April 28, 2008 0354z
Launch site: Satish Dhawan Space Centre, India

Status: Operational

Current Mode: dependant on last received command

Uplink: 145.980 MHz FM
Downlink: 437.275 Mhz CW
437.405 MHz Packet

For the latest project status update please visit the Compass 1 web
page: http://www.raumfahrt.fh-aachen.de/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnumR

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID4&retURL
�atellites/status.php
[06162011]
��CO-66 Seeds II
Catalog number:
Launch Date: April 28, 2008 0354z
Launch site: Satish Dhawan Space Centre, India

Status: Operational

Downlink: 437.485 MHz

Callsign: JQ1YGU

For the latest project status update please visit the Seeds 2 web
page: http://cubesat.aero.cst.nihon-u.ac.jp/english/seeds_2_e.html

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum6

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID3&retURL
�atellites/status.php
[02092011]
��CAPE-1
Catalog Number: 31130
Launch Date: April 17,2007 0702z
Launch site: Baikonur, Kazakhstan

Status: Intermittent

Current Mode: /u

TLM Downlink: 435.245 MHz 9600 bs FSK AX.25
CW Beacon: 435.245 MHz CW

Callsign: K5USL

TLM and CW interchange every 30 seconds.

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID&#65533;&retURL
/satellites/status.php

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnumr
[02092011]
&#65533;&#65533;CP3
Catalog Number: 31129
Launch Date: April 17,2007 0702z
Launch site: Baikonur, Kazakhstan

Status: Operational

Current Mode: /u

Downlink: 436.845 MHz 1200 bps AFSK AX.25

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnumt
[02092011]
&#65533;&#65533;CO-58 CubeSat XI-V
Catalog number: 28895
Launch Date: October 27, 2005 0652z
Launch site: Plesetsk Missile and Space Complex, Russia

Status: Operational - CW Beacon only

Current Mode: /u

Telemetry Downlink: 437.4250 MHz AFSK 1200bps using AFK protocol
Beacon: 437.2750 MHz CW

Callsign: JQ1YGW

Official Webpage: http://www.space.t.u-tokyo.ac.jp/cubesat/mission/V/

Pictures received by Mineo Wakita - JE9PEL:
http://www.ne.jp/asahi/hamradio/je9pel/xivpicte.htm

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum7
[02092011]
&#65533;&#65533;CO-57 CubeSat XI-IV
Catalog number: 27848
Launch date: June 30, 2003 1415z
Launch site: Plesetsk Missile and Space Complex, Russia

Status: ?????

Current Mode: /u

Beacon: 436.8475 MHz CW
Telemetry : 437.4900 MHz AFSK 1200 BPS

Callsign: JQ1YGW

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID&#65533;&retURL
&#65533;atellites/status.php

Official Webpage: http://www.space.t.u-tokyo.ac.jp/cubesat/mission/V/
[02092011]
&#65533;&#65533;QuakeSat
Catalog Number: 27845
Launch Date: June 30, 2003 1415z
Launch site: Plesetsk Missile and Space Complex, Russia

Status: Telemetry only

Current Mode: 9600 baud data packet

Mode U packet
Downlink: 436.675 MHz 9k6 BPS

Quakesat webpage:
http://www.quakefinder.com/services/quakesat-ssite/
[02252011]
&#65533;&#65533;CO-55 Cute-1.7+APD II
Catalog Number: 27844
Launch date: June 30, 2003 1415z
Launch site: Plesetsk Missile and Space Complex, Russia

Status: Operational

Current Mode: CW downlink worldwide
AX25 Packet with uplink command over Japan only

Mode U Telemetry
Downlink: 437.4000 MHz AFSK 1200 BPS

Mode U TLM Beacon
Downlink: 436.8375 MHz CW

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satIDi&retURL
&#65533;atellites/status.php

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnumx
[02092011]
&#65533;&#65533;NO-44 PCSAT
Catalog number: 26931
Launch Date: September 30, 2001 0240z
Launch site: Kodiak Launch Complex, Alaska, USA

Status: Telemetry only

Current Mode: V/v

General Usage Uplink/Downlink: 145.827 MHz 1200 Baud
Special Usage Downlink: 144.390 Mhz 1200 Baud

PCSAT APRS page: http://pcsat.aprs.org

aprstlm Telemetry Decoder program:
http://www.xciv.org/~iain/aprstlm/v1.2/
[02092011]
��RS-22 RADIO SPORT 22 (MOZHAYETS 4)
Catalog number: 27939
Launch Date: September 27, 2003 0612z
Launch site: Plesetsk Missile and Space Complex, Russia

Status: Operational - 70cm cw only

Current Mode: /u

CW Beacon - 435.352 MHz
145.818 MHz

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satIDv&retURL
�atellites/status.php
[02092011]
��LO-19 LUSAT
Catalog number: 20442
Launch date: January 22, 1990
Launch site: Kourou, French Guiana

Status: CW Beacon only

Uplinks: 145.840 MHz 1200-baud Manchester FSK
145.860 MHz 1200-baud Manchester FSK
145.880 MHz 1200-baud Manchester FSK
145.900 MHz 1200-baud Manchester FSK

CW downlink: 437.125 MHz

Digital downlink: 437.150 MHz SSB (RC-BPSK 1200-baud PSK)

Broadcast Callsign: LUSAT-11
BBS: LUSAT-12

General information and telemetry samples can be found at:
www.telecable.es/personales/ea1bcu
[02092011]
��UO-11 OSCAR-11
Catalog number: 14781
Launch Date: March 1, 1984
Launch site: Vandenburg AFB, California, USA

Status: Operational ?

Current Mode: /v

Telemetry Downlink: 145.825 MHz FM 1200 AFSK
UHFBeacon: 435.025 MHz
Mode-S Beacon: 2401.500 MHz

Mode and Antenna Polarization:
V: RHCP
S: LHCP

Webpage: http://www.users.zetnet.co.uk/clivew/
MPEG3 files: http://www.ne.jp/asahi/hamradio/je9pel/uo11tlme.htm
[07052011]
��INTERNATIONAL SPACE STATION (ISS) - ARISS
Catalog number: 25544
Launch date: November 20, 1998 0640z (ZARYA module)
Launch sites: Baikonur, Kazakhstan
Kourou, French Guiana
Uchinoura Space Center, Japan
Kennedy Space Center, Titusville, Florida, USA

Status: Operational

Current Active Modes: FM Repeater - OFF
Voice - V/v
BBS - OFF
2m APRS - ON
70cm Digi - ON
SSTV - OFF

Expedition 30 Crew (November 2011 - March 2012):
Commander: Dan Burbank KC5ZSX
Flight Engineer: Anton Shkaplerov
Flight Engineer: Anatoly Ivanishin
Flight Engineer: Oleg Kononenko RN3DX
Flight Engineer: Andr� Kuipers PI9ISS
Flight Engineer: Don Pettit KD5MDT

Available Modes and Frequencies:
Digital/APRS:
Worldwide 2m packet uplink: 145.825 MHz FM 1k2
Worldwide 2m packet downlink: 145.825 Mhz FM 1k2
Worldwide 70cm packet downlink: 437.550 Mhz FM 1k2
Worldwide 70cm packet downlink: 437.550 Mhz FM 1k2

Voice:
Region 1 voice uplink: 145.200 MHz FM
Region 2/3 voice uplink: 144.490 MHz FM
Worldwide downlink: 145.800 MHz FM

Crossband Repeater:
Repeater Uplinks: 1269.650 MHz FM
437.800 MHz FM
145.990 MHz FM - 67.0 PL (Kenwood)
Repeater Downlink: 145.800 MHz FM
437.800 MHz FM (Kenwood)

SSTV Robot 36:
Downlink: 145.800 MHz FM

Mode and Antenna Polarization:
V: Linear
U: Linear

Callsigns:
Belgian: OR4ISS
German: DP0ISS
Russian: RS0ISS
RZ3DZR
United States: NA1SS
2m Packet Mailbox: RS0ISS-11
2m Digipeater alias: ARISS
70cm Packet Mailbox: RS0ISS-1
70cm Digipeater callsign: RS0ISS
70cm Digipeater alias: ARISS

Official ARISS Webpage: http://www.rac.ca/ariss
ISS Fan Club Webpage: http://www.issfanclub.com
APRS tracking page: http://www.ariss.net/

ISS Daily Crew Schedule: http://spaceflight.nasa.gov/station/timelines
Remember that the crew operates on UTC time. Also, all of the time
line is NOT translated from Russian and posted.
[12262011]
NNNN
/EX

SB SAT @ AMSAT W8ISS $WSR-045.S3
WSR 045 Part 3 02/14/2012

AMSAT NEWS SERVICE BULLETIN 045.S3
FROM AMSAT HQ SILVER SPRING, MD, February 14, 2012
TO ALL RADIO AMATEURS
BID: $WSR-045.S3

THE FOLLOWING ARE IN ORBIT BUT ARE NON-OPERATIONAL AT THIS TIME:

NANOSAIL-D
Catalog Number: 37361(?)
Ejection Date: January 17, 2011

Status: On orbit

Downlink: 437.270 MHz AX.25

URL: http://nanosaild.engr.scu.edu/dashboard.htm

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum5
[01052012]
��HO-68 HOPE-1 (CAS-1)(XW-1)
Catalog Number: 36122
Launch Date: December 15, 2009 0231z
Launch site: Taiyuan Space Center, PRC

Status: Non - Operational

Callsign:
Broadcast: BJ1SA-11
BBS: BJ1SA-12

Uplinks: 145.8250 MHz FM, PL 67.0 Hz.
145.9250 - 145.9750 MHz SSB/CW
145.8250 MHz AFSK 1200 BPS
Downlinks: 435.6750 MHz FM
435.7650 - 435.7150 MHz SSB/CW
435.6750 MHz AFSK 1200 BPS

Beacon: 435.7900 MHz CW

Mode and Antenna Polarization:
V: LHCP 2.0dBi max
U: RHCP 3.0dBi max

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum8

For more information about XW-1 (CAS-1):
http://
[01122012]
��SO-67 SumbandilaSat
Catalog Number: 35870
Launch Date: September 17, 2009 1555z
Launch site: Baikonur, Kazakhstan

Status: Non - Operational

Callsign: ZS0SUM

Uplink: 145.875MHz FM tone 233.6 Hz
Downlink: 435.345MHz FM

Mode and Antenna Polarization:
V: Linear
U: Linear

For more information about SO-67:
http://www.amsatsa.org.za/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum�
[01272012]
��CP4
Catalog Number: 31132
Launch Date: April 17, 2007

Status: Non-Operational

Current Mode: /u

TLM Downlink: 437.325 MHz 1200 bps FSK AX.25
CW Beacon: 437.325 MHz CW

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnumy
[09062010]
��LIBERTAD-1
Catalog Number: 31128
Launch Date: April 17, 2007

Status: Non-Operational

Current Mode: V/u APRS Packet ax25

Callsign: 5K3L

Uplink: 145.825 MHz 1200 AFSK ax25 APRS
Downlink: 437.399 MHz 1200 AFSK ax25 APRS

Telemetry Beacon: 437.4050 MHz 1200 AFSK ax25

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnumv
[09062010]
��PO-63 PEHUENSAT-1
Catalog Number: 29712
Launch Date: January 10, 2007

Status: Non-Operational

Current Mode: V/v

Uplink/Downlink: 145.825 Mhz FM
Voice Recorder: 145.825 Mhz FM

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnumQ
[09062010]
��NCUBE-2
Catalog number: 28897
Launch Date: October 27, 2005

Status: Still attached to XO-53 (SSETI)?

Proposed Callsign: TBA
Proposed Transmit Frequency: 437.305
2407.250

Official Website: http://www.ncube.no

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum$
[09062010]
��XO-53 SSETI
Catalog number: 28894

Launch Date: October 27, 2005

Status: Non-operational

Voice Uplink: 437.250 MHz FM 67Hz CTCSS
Voice Downlink: 2401.835 MHz FM
Packet Up/Downlink: 437.250 MHz 9k6 packet
Packet Downlink 2401.835 MHz 38k4 packet

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnumT
[09062010]
��UWE-1
Catalog Number: 28892
Launch Date: October 27, 2005

Status: Non-Operational

Mode U Telemetry
Downlink: 437.5050 MHz 9600 AFSK

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnumS
[09062010]
��AO-51 ECHO
Catalog number: 28375
Launch date: June 29, 2004 0745z
Launch site: Baikonur, Kazakhstan

Status: Non - Operational

Current Mode(s):
Voice repeater: V/u
Uplink: 145.880 MHz FM
Downlink: 435.150 MHz FM

Telemetry: Recovery efforts
Downlink: 435.150MHz 9k6

Analog voice downlink: 435.300 MHz FM
435.150 MHz FM
2401.200 Mhz FM
Analog voice uplink: 145.860 MHZ FM
145.880 MHz USB
145.880 MHz FM
145.920 MHz FM
145.920 MHz FM - 67 Hz PL tone burst
1268.705 MHz FM
Digital Downlinks: 435.150 MHz FM 38k4 PBP, 1 watt output
435.150 MHz FM 9k6 Pacsat Broadcast Protocol
2401.200 MHz FM 38k4 bps, AX.25
Digital Uplink: 145.860 MHz FM 9k6 Pacsat Broadcast Protocol
1268.703 mhz FM 9k6 Pacsat Broadcast Protocol

Beacon: 435.150 MHz

Mode and Antenna Polarization:
T: Linear
V: Linear
U: TX A (usually digital)LHCP
TX B (usually analog) RHCP
L: Linear
S: Linear

Broadcast: PECHO-11
BBS: PECHO-12

Official Webpage: http://www.amsat.org/amsat-new/echo/CTNews.php

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum
[12062011]
��CANX-1
Catalog Number: 27847
Launch Date: June 30, 2003

Status: Non-Operational

Downlink: 437.8800 MHz AFSK 1k2bps
[06052009]
��DTUSAT
Catalog Number: 27842
Launch Date: June 30, 2003

Status: Non-Operational

Current Mode: 2k4 AFSK Packet last reported

Downlink: 437.475MHz

Officail webpage: http://dtusat1.dtusat.dtu.dk/

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID1&retURL
�tellites/all_oscars.php
[02212009]
��AO-49 AATiS OSCAR-49 (SAFIR-M)
Catalog number: 27605
Launch Date: December 20, 2002

Status: Non-operational.

Uplink: 435.275 MHz 1200-baud AFSK
Downlink: 145.825 MHz 9600-baud FSK
(optional voice message)

Broadcast callsign: DP0AIS

Official webpage: http://amend.gmxhome.de
[01222007]
��MO-46 TIUNGSAT-1
Catalog number: 26548
Launch date: September 26, 2000

Status: Telemetry only

Uplinks: 145.850 MHz
145.925 MHz 9600-baud FSK
Downlink: 437.325 MHz

Broadcast callsign: MYSAT3-11
BBS: MYSAT3-12

TiungSat-1 is Malaysia's first micro-satellite and in addition to
commercial land and weather imaging payloads offers FM and FSK
Amateur Radio communication.

TiungSat-1, named after the mynah bird of Malaysia, was developed as
a collaborative effort between the Malaysian government and Surrey
Satellite Technology Ltd.
[03302009]
��NO-45 SAPPHIRE
Catalog number: 26932
Launch Date: September 30, 2001

Status: Non-Operational

Downlink: 437.095 MHz 1200 baud AX-25 AFSK
Uplink: 145.945 MHz UI Digipeater
Digi Callsign: KE6QMD

Everyone is welcome to use the digipeating/APRS features of Sapphire,
as per the user service agreement located at the following URL:
http://web.usna.navy.mil/~bruninga/pcsat/contract.txt
[03132005]
��SO-42 SAUDISAT-1B
Catalog number: 26549
Launch date: September 26, 2000

Status: Non-Operational

Downlink: 437.075 MHz

Broadcast Callsign: SASAT2-11
BBS: SASAT2-12

Further information is available at:
http://www.amsat.org/amsat/sats/n7hpr/so42.html
[01222007]
��SO-41 SAUDISAT-1A
Catalog number: 26545
Launch Date: September 26, 2000

Status: Non-Operational

Uplink: 145.850 MHz
Downlink: 436.775 MHz

Broadcast Callsign: SASAT1-11
BBS: SASAT1-12

Further information is available at:
http://www.amsat.org/amsat/sats/n7hpr/so41.html
[01222007]
��AO-40 AMSAT OSCAR 40
Catalog number: 26609
Launch Date: November 16, 2000

Status: Non-Operational

Uplinks

V-band: 145.840 - 145.990 MHz CW/LSB
U-band: 435.550 - 435.800 MHz CW/LSB
L1-band: 1269.250 - 1269.500 MHz CW/LSB
L2-band: 1268.325 - 1268.575 MHz CW/LSB

Downlinks

S2-band: 2401.225 - 2401.475 MHz CW/USB
K-band: 24048.010 - 24048.060 MHz CW/USB
Beacon: 2401.323 MHz
24048.035 MHz

P3-D Telemetry Beacons (IHU)

BEACON General Beacon(GB) Middle Beacon(MB) Engineering Beacon(EB)
2 m none 145.898 MHz none
70cm 435.438 MHz 435.588 MHz 435.838 MHz
13cm(1) 2400.188 MHz 2400.338 MHz 2400.588 MHz
13cm(2) 2401.173 MHz 2401.323 MHz 2401.573 MHz
3cm 10450.975 MHz 10451.125 MHz 10451.375 MHz
1.5cm 24047.885 MHz 24048.035 MHz 24048.285 MHz
[07162007]
��OO-38 OPAL
Catalog Number: 26063
Launch Date: January 27, 2000

Status: Non-Operational

Mode U TLM Beacon
Downlink: 437.1000 MHz 9600 FSK
[08132007]
��UO-36 UoSAT-12
Catalog number: 25693
Launch date: April 21, 1999

Status: Unknown

Uplink: 145.960 MHz (9600-baud FSK)
Downlinks: 437.025 MHz
437.400 MHz

Broadcast Callsign: UO121-11
BBS: UO121-12

The VK5HI viewer shareware for UO-36 is available on the AMSAT-NA web
site at the following URL:
ftp://ftp.amsat.org/amsat/software/win32/display/ccddsp97-119.zip
[01222007]
��SO-35 SUNSAT
Catalog Number: 25636
Launch date:February 23, 1999

Status: Non-Operational

Downlink: Mode B Repeater: 436.291 MHz
Mode J Digipeater: 436.250 MHz

Uplinks: Mode B Repeater: 145.825 MHz
Mode J Digipeater: 145.825 MHz
145.900 MHz

For more information of SUNSAT vist the satellite web site:
http://esl.ee.sun.ac.za/projects/sunsat/
[01222007]
��PO-34 PANSAT
Catalog number: 25520
Launch date: October 30, 1998

Status: Telemetry downloads only

Uplink/downlink: 436.500 MHz

Official Webpage: http://www.sp.nps.navy.mil/pansat/
[05092004]
��SO-33 SEDSAT-1
Catalog number: 25509
Launch date: October 24, 1998

Status: Semi-operational

Downlink: 437.910 MHz FM (9600-baud FSK)

The satellite is not currently available for uplink transmissions and
the image and transponder recovery efforts have been unsuccessful.

For more information on SedSat-1 visit the satellite web site:
http://seds.uah.edu/projects/sedsat/sedsat.htm
[09042006]
��GO-32 Gurwin TechSat-1B
Catalog number: 25397

Launch Date: July 10, 1998

Status: Non-Operational

Current Modes:
Telemetry : /u

Downlink: 435.225 MHz FM (9600-baud FSK)
435.325 Mhz - Not Available - temperature problems
Uplinks: 145.850 FM
145.890 FM
145.930 FM
1269.700 FM
1269.800 FM
1269.900 FM

Broadcast Callsign: 4XTECH-11
BBS Callsign: 4XTECH-12

More information of GO-32 can be found at:
http://asri.technion.ac.il/techsat/

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID&retURL
�atellites/status.php
[07172010]
��TO-31 TMSAT-1
Catalog number: 25396
Launch Date: July 10, 1998

Status: Non-operational

Uplink: 145.925 MHz 9600 baud FSK
Downlink: 436.925 MHz 9600 baud FSK

Broadcast callsign: TMSAT1-11
BBS: TMSAT1-12
[05012006]
��MO-30 UNAMSAT-2
Catalog Number: 24305
Launch Date: September 5, 1996

Status: Non-operational

Downlink: 435.1380 MHz AFSK 1200 BPS
Downlink: 435.2060 MHz AFSK 1200 BPS
Uplink: 145.8150 MHz AFSK 1200 BPS
Uplink: 145.8350 MHz AFSK 1200 BPS
Uplink: 145.8550 MHz AFSK 1200 BPS
Uplink: 145.8750 MHz AFSK 1200 BPS
[06042009]
��PO-28 POSAT-1
Catalog number: 22829

Launch Date: September 25, 1993

Status: Non-operational

Downlink: 429.950
Uplink: Not until handover back to Amatuer usage

Broadcast callsign: POSAT1-11
BBS callsign: POSAT1-12

AMSAT Webpage: http://www.amsat.org/amsat/sats/n7hpr/po28.html
POSAT-1 webpage:
http://www.ee.surrey.ac.uk/SSC/CSER/UOSAT/missions/posat1.html
[01012009]
��IO-26 ITAMSAT
Catalog number: 22826
Launch Date: September 26, 1993

Status: PSK carrier only

Current Mode:

Uplinks: 145.875 MHz FM 1200-baud
145.900 MHz FM 1200-baud
145.925 MHz FM 1200-baud
145.950 MHz FM 1200-baud

Downlink: 435.808 MHz PSK

Broadcast Callsign: ITMSAT-11
BBS: ITMSAT-12

Official webpage: http://www.itamsat.org
AMSAT Webpage: http://www.amsat.org/amsat/sats/n7hpr/io26.html
[01212007]
��KO-25 KITSAT
Catalog number: 22828
Launch date: September 26, 1993

Status: Non-operational

Uplink: 145.980 MHz FM 9600-baud FSK
Downlink: 436.500 MHz FM

Broadcast Callsign: HL02-11
BBS: HL02-12
[05092004]
��AO-24 ARSENE
Catalog Number: 22654
Launch Date: May 13, 1993

Status: Non-operational

Uplink: 435.0625 MHz FM 1k2bps AFSK
435.1125 MHz FM 1k2bps AFSK
435.1375 MHz FM 1k2bps AFSK
Downlink: 145.9750 MHz FM 1k2bps AFSK
2446.5025 MHz FM 1k2bps AFSK

Beacon: 2446.4700 MHz CW

Broadcast callsign:
BBS:
[12162009]
��KO-23 KITSAT
Catalog number: 22077
Launch date: August 10, 1992

Status: Non-operational

Uplink: 145.900 MHz FM (9600-baud FSK)
Downlink: 435.170 MHz FM

Broadcast Callsign: HLO1-11
BBS: HLO1-12
[01222007]
��UO-22 UOSAT
Catalog number: 21575
Launch date: July 17, 1991

Status: Non-Operational

Uplink: 145.900 FM 9600-baud FSK
Downlink: 435.120 MHz FM

Broadcast Callsign: UOSAT5-11
BBS: UOSAT5-12
[01222007]
��AO-21 AMSAT-OSCAR 21
Catalog Number: 21087
Launch Date: January 29, 1991

Status: Non-Operational

Uplink: 435.041 MHz FM DSP
Downlink: 145.983 MHz FM DSP
[01222007]
��FO-20 JAS-1b
Catalog number: 20480
Launch Date: February 07, 1990

Status: Non-Operational

Beacons: 435.795 MHz CW
435.910 MHz AX25

Voice Transponder:
Uplink: 145.900 to 146.000 MHz CW/LSB

Downlink: 435.800 to 435.900 MHz CW/USB

Digital Transponder:
Uplinks: 145.850 MHz
145.870 MHz
145.890 MHz
145.910 MHz
Downlink: 435.910 MHz

More FO-20 info can be found at:
http://www.amsat.org/amsat/sats/n7hpr/fo20.html
[01152007]
��WO-18 WEBERSAT
Catalog Number: 20441
Launch Date: January 22, 1990

Status: Non-Operational

Downlink: 437.104 MHz SSB 1200 Baud PSK AX.25
[05012006]
��DO-17 Dove
Catalog Number: 20440
Launch Date: January 22, 1990

Status: Non-operational.

Downlink: 145.825 MHz FM 1200 Baud AFSK
Beacon: 2401.220 MHz
[05012006]
��AO-16 PACSAT
Catalog number: 20439
Launch Date: January 22, 1990

Status: non-operational

Current Mode: V/u

Uplink: 145.900 MHz FM 1200-baud Manchester FSK (reserved)
145.920 MHz FM VOICE
145.940 MHz FM 1200-baud Manchester FSK (reserved)
145.960 MHz FM 1200-baud Manchester FSK (reserved)

Downlink: 437.026 MHz USB VOICE
(1200-baud PSK - MBL Telemetry Only)

Mode-S Beacon: 2401.1428 MHz [NO FUTURE OPERATIONS PLANNED]

Mode and Antenna Polarization:
U: RC 437.050 MHz RHCP
PSK 437.026 MHz LHCP
V: Linear

Broadcast Callsign: PACSAT-11
BBS: PACSAT-12

AO-16 AMSAT Webpage: http://www.amsat.org/amsat/sats/n7hpr/ao16.html
[07242009]
��UO-15 UoSAT-4
Catalog Number: 20438
Launch Date: January 22, 1990

Status: Non-operational

Uplink: ?
Downlink: 435.1250MHz (?)
435.1200MHz (?)
[06042009]
��UO-14 UoSAT-3
Catalog number: 20437
Launch date: January 22, 1990

Status: Non-operational

Uplink: 145.975 MHz FM
Downlink: 435.070 MHz FM
[05092004]
��FO-12 Fuji-OSCAR 12
Catalog Number: 16909
Launch Date: August 12, 1986

Status: Non-Operational

Mode V/U (J) Linear Transponder (Inverting):
Uplink: 145.9000 - 146.0000 MHz SSB/CW
Downlink 435.8000 - 435.9000 MHz SSB/CW

Mode V/U (J) Packet:
Uplink: 145.8500 MHz MFSK 1200 BPS
Uplink: 145.8700 MHz MFSK 1200 BPS
Uplink: 145.8900 MHz MFSK 1200 BPS
Uplink: 145.9100 MHz MFSK 1200 BPS

Downlink 435.9100 MHz PSK 1200 BPS

Telemetry Beacon: 435.7950 MHz SSB/CW
[01152007]
��AO-10 OSCAR 10
Catalog number: 14129
Launch Date: June 16, 1983

Status: Non-operational

Uplink: 435.030 to 435.180 MHz CW/LSB
Downlink: 145.975 to 145.825 MHz CW/USB

Beacon: 145.810 MHz (unmodulated carrier)

W4SM has more information about the satellite at the following URL:
http://www.cstone.net/~w4sm/AO-10.html
[05092004]

��AO-8 AMSAT-OSCAR 8
Catalog Number: 10703
Launch Date: March 3, 1978

Status: Non-Operational

Mode V/U (J) Linear Transponder (Non-Inverting): Non-Operational
Uplink: 145.9000 - 146.0000 MHz SSB/CW
Downlink 435.1990 - 435.2000 MHz SSB/CW

Mode V/U (J) TLM Beacon: Non-Operational
Downlink 435.0950 MHz CW

Mode V/A (A) Linear Transponder (Non-Inverting): Non-Operational
Uplink: 145.8500 - 145.9000 MHz SSB/CW
Downlink 29.4000 - 29.5000 MHz SSB/CW

Mode V/A (A) TLM Beacon: Non-Operational
Downlink 29.4020 MHz CW
[01152007]
��AO-6 AMSAT-OSCAR 6
Catalog Number: 06236
Launch Date: October 15, 1972

Status: Non-Operational

Uplink: 145.9000 - 146.0000 MHz SSB/CW
Downlink: 29.4500 - 29.5500 MHz SSB/CW
Beacons: 29.450 MHz
435.100 MHz
[01312008]
��AO-5 Australis-OSCAR 5
Catalog Number: 04321
Launch Date: January 23, 1970

Status: Non-Operational

Telemetry Beacons: 144.0500 MHz CW
29.4500 MHz CW
[01152007]
��OSCAR III
Catalog Number: 01293
Launch Date: March 09, 1965

Status: Non-Operational

Uplink: 145.9750 - 146.0250 MHz SSB/CW
Downlink: 144.3250 - 144.3750 MHz SSB/CW
[01012007]
��RS-15 RADIO SPORT RS-15
Catalog number: 23439
Launch Date: December 26, 1994

Status: Non-operational

Uplink: 145.858 to 145.898 MHz CW/USB
Downlink: 29.354 to 29.394 MHz CW/USB

Beacon 1: 29.352 MHz (intermittent)
Beacon 2: 29.398 MHz

SSB meeting frequency: 29.380 MHz (unofficial)
[06202004]
��RS-13 RADIO SPORT RS-13
Catalog number: 21089
Launch date: February 5, 1991

Status: Non-operational

Uplink: 21.260 to 21.300 MHz CW/USB
Downlink: 145.860 to 145.900 MHz CW/USB

Beacon: 145.860 MHz

Robot: 145.908 MHz
[05232004]
��RS-12 RADIO SPORT RS-12
Catalog number: 21089
Launch date: February 5, 1991

Status: Non-operational

Uplink: 21.210 to 21.250 MHz CW/USB
Downlink: 29.410 to 29.450 MHz CW/USB

Beacon: 29.408 MHz

Robot: 29.454 MHz
[05232004]
NNNN
/EX

SB SAT @ AMSAT W8ISS $WSR-045.S4
WSR 045 Part 4 02/14/2012

AMSAT NEWS SERVICE BULLETIN 045.S4
FROM AMSAT HQ SILVER SPRING, MD, February 14, 2012
TO ALL RADIO AMATEURS
BID: $WSR-045.S4

THE FOLLOWING SATELLITES HAVE RE-ENTERED OR HAVE BEEN RETURNED SAFELY:

ARISSat-1
Catalog number: 37772
Launch date: August 03, 2011 1843z
Launch site: International Space Station

Status: Re-entered January 05, 2012

Callsign: RS01S

Current Mode(s):
Linear Transponder: U/v
Uplink: 435.758 to 435.742 MHz CW/LSB
Downlink: 145.922 to 145.938 MHz CW/USB

FM Telemetry/SSTV/Messages/ID:
Downlink: 145.950 MHz FM

Telemetry/Beacon:
Downlink: 145.939 MHz CW1
145.919 MHz CW2
145.920 MHz 1k BPSK USB
145.920 MHz 400b BPSK USB

Official Webpage:http://www.amsat.org/amsat-new/ARISSat/ARISSat.php

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/informal_detail.php?serialnum&#65533;
[01052012]
&#65533;&#65533;CAERUS
Catalog Number:
Launch Date: December 08, 2010 15:43:00 UTC
Launch site: Kennedy Space Center, Titusville, Florida, USA

Status: Re-entered December 22, 2010

Uplink:
Downlink: 437.600 MHz 1k2 AX.25

Beacon: 437.600 MHz CW

Callsign: KJ6FIX

URL:
http://www2.isi.edu/research/prj-serc/prj-serc_projects/prj-serc_projects
-8.
htm

IARU coordination status page:

[11102011]
&#65533;&#65533;CO-56 CUTE-1.7 + APD
Catalog number: 28941
Launch date: February 21, 2006

Status: Re-entered
Re-entered: October 25, 2009

Uplink: 1268.5000 MHz GMSK 9600 BPS
Downlink: 437.4700 MHz 1200 FM ax25 or SRLL (ACTIVE only near Japan?)

Telemetry Beacon: 437.3850 CW
Callsign: JQ1YPC

Information webpage:
http://lss.mes.titech.ac.jp/ssp/spacerium/cute1blog/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnumV
[09062010]
��BEVO-1 (DRAGONSAT-1)
Catalog Number: 35690
Launch Date: May 19, 2009

Status: Re-entered
Re-entered:

Downlink: 437.325 MHz 9k6 GMSK
437.325 MHz CW 20wpm

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum7
[07312009]
��AggieSat2 (DRAGONSAT-2)
Catalog Number: 35690
Launch Date: May 19, 2009

Status: Re-entered
Re-entered:

Downlink: 436.250 MHz 9k6 FHSS
[11112009]
��Pollux
Catalog Number: 35693
Launch Date: July 31, 2009

Status: Re-entered
Re-entered:

Callsign: POLLUX-1

Downlink: 145.825MHz 1k2 AX.25

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum9
[09062010]
��Castor (ANDE-2)
Catalog Number: 35694
Launch Date: July 31, 2009

Status: Re-entered
Re-entered:

Callsign: KD4HBO-1

Downlink: 145.825 MHz 1k2 AX.25

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum4

[09062010]
��NO-62 FCAL
Catalog Number: 29667
Launch Date: December 21, 2006

Status: Re-Entered
Re-entered: July 28, 2008

Downlink: 437.385 Mhz APRS AX25

Downlink ID: KD4HBO

Website: http://eng.usna.navy.mil/~bruninga/fcal.html

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnumY
[01012009]
��NO-61 ANDE
Catalog Number: 29664
Launch Date: December 21, 2006

Status: Re-Entered
Re-entered: December 25, 2007

Uplink/Downlink: 145.825 Mhz FM APRS AX25
[01032008]
��NO-60 RAFT-1
Catalog Number: 29661
Launch Date: December 21, 2006

Status: Re-Entered
Re-entered: May 30, 2007

Main Downlink: 145.825 Mhz FM APRS AX25
APRS Uplink: 145.825 MHz FM APRS AX25
Voice/PSK31 Uplink: 28.120 MHz

Packet to Voice ID: RAFT
[06112007]
��GENESAT-1
Catalog Number: 29655
Launch Date: December 16, 2006

Status: Re-Entered
Re-entered date: August 8, 2010

Current Mode: /u

Callsign: KE7EGC

Telemetry Beacon Downlink: 437.0695 MHz AFSK 1200 BPS

Official webpage: http://www.crestnrp.org/genesat1/ahc.html
[08082010]

��HO-59 HITSat
Catalog number: 29484
Launch date: September 22, 2006

Status: Re-Entered
Re-entered: June 18, 2008

Telemetry Downlink: 437.4250 MHz AFSK 1200 BPS
Beacon: 437.2750 MHz CW

Callsign: JR8YJT
[01012009]
��SO-43 Starshine 3
Catalog Number: 26929
Launch Date: September 30, 2001

Status: Re-Entered
Re-entered: January 21, 2003

Beacon: 145.825Mhz
[02212009]
NNNN
/EX

ANS is released worldwide via the AMSAT ANS e-mail reflector and a live radiocast on the AMSAT-NA 20-meter net held each Sunday on 14.282 MHz. Pre-net operations start at 18:00 UTC, with current ANS bulletins transmitted to the eastern U.S. at 19:00 UTC and to the western U.S. at 19:30 UTC.

Information on AMSAT-NA is available at the following URL:
http://www.amsat.org

Mailing address:
AMSAT-NA
850 Sligo Avenue, Suite 600
Silver Spring, Maryland 20910-4703

Voice: 301-589-6062
888-322-6728
FAX: 301-608-3410

Currently, AMSAT-NA supports the following (free) mailing lists:

* AMSAT News Service (ANS)
* General satellite discussion (AMSAT-BB)
* Orbit data (KEPS)
* Manned space missions (SAREX)
* District of Columbia area (AMSAT-DC)
* New England area (AMSAT-NE)
* AMSAT Educational Liaison mailing list (AMSAT-EDU)
* AMSAT K-12 Educational Liaison mailing list (AMSAT-K12)

A daily digest version is available for each list.

To subscribe, or for more list information, visit the following URL:
http://www.amsat.org/mailman/listinfo/ans

In addition to regular membership, AMSAT-NA offers membership in the President's Club. Members of the President's Club, as sustaining donors to AMSAT Project Funds, will be eligible to receive additional benefits. Application forms are available from the AMSAT-NA Office.

This week's Weekly Satellite Report Editor is James French, W8ISS.

ANS is always dedicated to past ANS editor 'BJ' Arts, WT0N, and to the memory of longtime AMSAT supporters Werner Haas, DJ5KQ, Dennis Kitchen, G0FCL and John Branegan GM4IHJ.

Please send any amateur satellite news or reports to: ans-editor{at}
amsat.org
NNNN
/EX

36. LEARN the fun way!

Newsgroup: rec.radio.amateur.space
Date: 2012-02-18 04:24:50 UTC
From: jincy biju <jincybijupeter2007@gmail.com>
Message-ID: <d107cd5e-47b9-4f17-815d-7b2b227314c8@tc8g2000pbc.googlegroups.com>
Source record: 186

"we learn a little by listening,
more by seeing,
most and the best by experiencing.
http://123maza.com/46/coral846/

37. ANS-050 AMSAT News Service Weekly Bulletins

Newsgroup: rec.radio.amateur.space
Date: 2012-02-19 02:25:28 UTC
From: JoAnne Maenpaa <k9jkm@comcast.net>
Message-ID: <002101cceead$b7658b60$2630a220$@net>
Source record: 187
Cross-posted to: rec.radio.amateur.space,rec.radio.info

AMSAT NEWS SERVICE
ANS-050

ANS is a free, weekly, news and information service of AMSAT North America, The Radio Amateur Satellite Corporation. ANS reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in designing, building, launching and communicating through analog and digital Amateur Radio satellites.

Please send any amateur satellite news or reports to:
ans-editor@amsat.org

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* Dick Daniels (W4PUJ) - SK, 1932 - 2012
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* AMSAT Preparations for Dayton Hamvention 2012
* Vega Launch Success - Cubesats Heard
* MASAT-1 Designated MagyarSat-OSCAR-72 (MO-72)
* Satellite Shorts From All Over

SB SAT @ AMSAT $ANS-050.01
ANS-050 AMSAT News Service Weekly Bulletins

AMSAT News Service Bulletin 050.01
>From AMSAT HQ SILVER SPRING, MD.
February 19, 2012
To All RADIO AMATEURS
BID: $ANS-050.01

NASA Press Release for 3rd Round of Cubesat Space Mission Candidates

On February 14, 2012 NASA issued a press release officially listing AMSAT-NA and all of the other 32 small satellites selected to fly in 2013 and 2014 as auxiliary payloads.

The proposed CubeSats come from universities across the country, the Radio Amateur Satellite Corporation, NASA field centers and Department of Defense organizations.

After launch, the satellites will conduct technology demonstrations, educational research or science missions. The selected spacecraft are eligible for flight after final negotiations and an opportunity for flight becomes available. The satellites come from the following

organizations:

-- Air Force Institute of Technology, Wright-Patterson AFB, Ohio
-- Air Force Research Lab, Wright-Patterson AFB
-- California Polytechnic State University, San Luis Obispo
-- Cornell University, Ithaca, N.Y.
-- Massachusetts Institute of Technology, Cambridge
-- Montana State University, Bozeman
-- Naval Postgraduate School, Monterey, Calif. (2 CubeSats)
-- NASA's Ames Research Center, Moffett Field, Calif.
-- NASA's Goddard Space Flight Center, Greenbelt, Md.
-- NASA's Jet Propulsion Laboratory, in partnership with the
California Institute of Technology, Pasadena (2 CubeSats)
-- NASA's Kennedy Space Center, Cape Canaveral, Fla.
-- The Radio Amateur Satellite Corporation, Silver Spring, Md.
-- Saint Louis University, St. Louis
-- Salish Kootenai College, Pablo, Mont.
-- Space and Missile Defense Command, Huntsville, Ala. (2 CubeSats)
-- Taylor University, Upland, Ind.
-- University of Alabama, Huntsville
-- University of California, Berkeley
-- University of Colorado, Boulder (2 CubeSats)
-- University of Hawaii, Manoa (3 CubeSats)
-- University of Illinois, Urbana (2 CubeSats)
-- University of Michigan, Ann Arbor
-- University of North Dakota, Grand Forks, N.D.
-- University of Texas, Austin
-- US Air Force Academy, Colorado Springs, Colo.
-- Virginia Tech University, Blacksburg

Thirty-two CubeSat missions have been selected for launch in the
previous two rounds of the CubeSat Launch Initiative. Eight CubeSat
missions have been launched (including five selected via the CubeSat
Launch Initiative) to date via the agency's Launch Services Program
Educational Launch of Nanosatellite, or ELaNa, program.

The full text of the NASA Press Release can be read on-line at:
http://www.nasa.gov/home/hqnews/2012/feb/HQ_12-050_CubeSats.html

SpaceDaily.com published a related story at:
http://tinyurl.com/Cubesats

For additional information on NASA's CubeSat Launch Initiative
program, visit: http://go.usa.gov/Qbf

Please make your donation to AMSAT's Fox-1 Fund at:
http://www.amsat.org

[ANS thanks NASA for the above information]

Dick Daniels (W4PUJ) - SK, 1932 - 2012

By Jan A. King W3GEY/VK4GEY

One of AMSAT's most important, admired and well loved members, Dick Daniels, W4PUJ, ex WA4DGU, died on February 14, 2012. He lost his battle with lung cancer, diagnosed only at Christmas time 2011. Dick achieved so much working for AMSAT that it is virtually impossible to enumerate his individual accomplishments. And we cannot overestimate the importance of his sustained support. Dick was many things to us but, among them he was our record keeper, photographic recorder, and the de facto AMSAT historian. So, his loss also represents the loss of many memories of the things we did and the places we've gone as an organization, which simply can't be recorded or kept except in a mind. So, our loss is huge! The records of our earlier spacecraft developments, starting with Australis-OSCAR-5 and continuing to present, amount to over 6,000 individual (non-duplicate) 35 mm slides. These have since been digitized. These were all kept and maintained by him. Many of the photos were his own.

Dick was born in Cincinnati, Ohio on May 19, 1932. He received a BBA degree from the University of Cincinnati in Business Management in 1956 and an MBA from the University of Pennsylvania Wharton Graduate School in 1957. He joined NASA HQ in 1961 where he remained until his retirement in 1994. Dick became a licensed radio amateur in 1959. He was involved with the formation of AMSAT in 1970 and served on the AMSAT Board of Directors from 1992 to 2003.

Dick was one of the initial AMSAT members and was Life Member 11. His first major contribution to amateur radio was his work to obtain permission from the NASA Administrator (then James Fletcher) and the NOAA Administrator (then Jack Townsend) for the launch of Australis-OSCAR-5. It was Dick who pushed our AMSAT letter proposal for the launch of AO-5 through the NASA and NOAA systems. Dick was also heavily involved in our efforts to license AO5 with the FCC. That was a much bigger deal back in 1970 than it is today. Few will appreciate the resistance we had within the system from the TIROS project office at NASA/GSFC and what had to be done to overcome it. Few will also remember the support we had from places we didn't expect, but, with Dick's help and all of us pushing - we were in "business" - the "business" of building satellites for free.

Dick became AMSAT-NA's primary mechanical designer and technician, having helped design and then assemble just about every spacecraft structure we launched starting with AMSAT-OSCAR-6. At the beginning of the Phase-3 era it became clear that AMSAT needed to go into the propulsion business if we were going to get to higher orbits and Dick took on the role of chief propulsion expert, in addition to his mechanical technician duties. Dick and I installed the Thiokol solid propellant kick motor into the ill-fated Phase-3A satellite once it arrived in French Guiana and it was Dick, working with MBB who loaded the bi-propellant fuels (UDMH or AZ-50 and N2O4) on-board AO-10, AO-13 and AO-40 (all very dangerous compounds). Even though the rocket motor each time was pure German technology, Dick was the

one we all trusted to handle the exacting task of propellant loading. He also developed, assembled and tested all of the PFAs (propellant flow assembly) units that controlled the fuel flow and pressurization of each of the propulsion systems. He also contributed significantly to their design details. The utilization of real, high performance propulsion systems on small satellites is still something no other small satellite organization other than AMSAT has successfully achieved. Few have even attempted to follow in our footsteps. We've had our difficulties with rocket motors (and what organization that has tried to use them has not?) but, at least AO-13 was perfect. No professional organization has ever done much better than the performance of that propulsion system. And, in large measure, the success of that system can be credited to Dick Daniels. The other P3 satellites, at least had partially successful motor firings, except for Phase-3A which was lost due to a launch vehicle failure, hence we never had a chance to fire our solid rocket motor.

Dick constructed the AO-6 2M/10M repeater (or transponder) designed by Perry Klein (W3PK) and Karl Meinzer (DJ4ZC). He also constructed the follow-on unit flown on AO-7. He assembled major portions of the receiver units forming both the command system and packet communications system developed by Tom Clark (W3IWI) for the four Microsat spacecraft launched in 1990. Dick assembled so much hardware that if you were to look at each individual sub-assembly that he built or worked on - as they exist in our master photo set - and you viewed each slide for 10 seconds, it would take over an hour to view all of them! That is a lot of space flight hardware.

Dick loved space flight, he loved the challenge represented by the amateur satellite program and he loved working with our many friends around the world. Together we accomplished something that will take years before others reproduce. More importantly, with Dick's huge support we actually created a new industry. Few lives can claim to have done that. The Small Satellite Industry is very alive and well and, as a sector of all space commerce it is now the fastest growing area. If Dick had not made his contributions, AMSAT would have had a very different history but, because of him and others who worked so hard to get things started, AMSAT is at the root of all of today's small satellite technology. This is a fact, not wishful thinking.

Dick also loved nature and the outdoors. We spent many happy times hiking in the mountains of Virginia, using the "famous" Daniels "cabin" as a base camp. We had great times chasing butterflies and watching sea turtles in French Guiana. Dick has a wonderful family and even though AMSAT took a significant fraction of his free time his daughter Kathy and his son Robert are proud of his accomplishments. Like all AMSAT "widows" Jackie supported Dicks "hobby" with enthusiasm and never complained about her time alone when Dick was integrating AMSAT spacecraft on the night shift (sometimes at home and sometimes with me at the AMSAT lab). His family will miss him terribly as he was not just an average father and husband.

Dick spent a lot of time working on the gantry level of many launch vehicles, installing AMSAT spacecraft on Delta and Ariane launchers and, as a NASA-HQ employee, he built more space flight hardware in his basement than anyone working for NASA in Washington, D.C. ever even saw in a lifetime. He loved life and he made his count. And he made a huge difference to the outcome of our hobby and our belief in what an individual can do in space.

So, we've lost someone that meant a lot to us all and someone who will be impossible to replace. History may repeat itself but, it will be a long time before someone like Dick Daniels, with his unique set of skills comes our way again. So, W4PUJ is SK. This is a sad day for amateur radio and to the small satellite space community and even more for those of us who loved him.

Dick, you made a difference and it will be a long time still before others reach where you have been. What you did wasn't just worthwhile - IT WAS FANTASTIC! I'll never forget our time working together! It was an amazing hobby, really! An amazing LIFE!

Jan A. King, W3GEY/VK4GEY

A memorial service will be held for Dick Daniels, W4PUJ on Saturday, February 25 at 1:00PM at Little Falls Presbyterian Church, 6025 Little Falls Rd, Arlington VA 22207. In lieu of flowers, the family suggests a contribution to: Capital Caring, 950 N Glebe Rd #500, Arlington VA 22203. This is the organization that provided hospice care for Dick. Donations in memory of Dick can also be made on-line: http://www.capitalcaring.org/donate-online

E-mail messages of condolence sent to martha@amsat.org will be given to Dick's family.

For those planning to attend Dick Daniels Memorial Service from out of the Washington DC area, a block of rooms has been reserved by the family. Reservations must be made by Tuesday at 4:00 PM EST. Go to: http://tinyurl.com/Daniels-AMSAT (Holiday Inn)

[ANS thanks Jan King, W3GEY/VK4GEY for the above information]

AMSAT Awards Announcement & New Postal Rates Notice

AMSAT Director Contests and Awards, Bruce Paige, KK5DO says congratulations are in order for our latest AMSAT Awards recipients.

The following have entered into the Satellite Communicators Club for making their first satellite QSO:

+ Ben Jacobs, KC9ROI

The following have earned the AMSAT Communications Achievement Award:

+ Hector Luis Martinez Sis, CO6CBF, #547
+ I Made Sudarsana SE, YB9AY, #548

The following have earned the South Africa Satellite Communications Achievement Award:

+ Hector Luis Martinez Sis, CO6CBF, #US178

The following have earned their Robert W. Barbee, Jr. W4AMI Award:

+ Hector Luis Martinez Sis, CO6CBF #76
+ Jim Adams, K0BAM upgrade to 2,000

The following have earned their Robert W. Barbee, Jr. W4AMI 5000 Award:

+ Mariusz Kocot SQ9MES, #29

To see all the awards visit http://www.amsat.org or http://www.amsatnet.com

Postage Rate Increase Drives New Cost of Awards:

The AMSAT Awards web page (http://www.amsat.org/amsat-new/awards/) will be updated with the new postage rate information. Please note that new U.S. Postage rates in effect January, 2012 now require envelopes with stiffeners in them (as AMSAT Awards are packaged) to be sent as first class small packages. Postage is now $2.00 within the U.S. and $5.00 for overseas.

[ANS thanks AMSAT Director Contests and Awards, Bruce Paige, KK5DO for the above information]

AMSAT Preparations for Dayton Hamvention 2012

AMSAT Vice-President of User Services, Gould Smith, WA4SXM says that planning is underway and the AMSAT Dayton team is busy preparing for our presence at the Hamvention, May 18-20, 2012.

AMSAT will be found in the same booths (444-449) in Ball Arena, right across from the ARRL area and just inside the door from the Satellite Demonstration area. Plan to visit all of the AMSAT activities!

+ AMSAT satellite prototypes
+ AMSAT Thursday Night Get-together
+ AMSAT Forum planned for Saturday morning
+ AMSAT/TAPR Banquet

AMSAT reserves a block of hotel rooms with priority given for those volunteering to work in the AMSAT booth for multiple 2 hour shifts during the Hamvention. More information will be released when this is finalized.

Additional information via ANS and the AMSAT web site Dayton area will be updated soon. Keep an eye on: http://www.amsat.org/amsat-new/hamvention/2012/Dayton.php

[ANS thanks Gould Smith, WA4SXM for the above information]

Vega Launch Success - Cubesats Heard

The European Space Agency Vega first flight was launched successfully on Monday, February 13 at 1000 UTC from the ESA Spaceport at Kourou in French Guiana. A YouTube video playback of the launch can be seen at: http://tinyurl.com/Vega-Launch

Following the launch signals had been reported from AlmaSat-1, Goliat, Masat-1, PW-Sat, UniCubeSat and XaTcobeo by amateur radio operators around the world.

Details of the satellite radio frequency and modulation type have been published on the web, see:
http://www.amsat.org
http://www.uk.amsat.org/4657
http://www.ne.jp/asahi/hamradio/je9pel/esa9cubf.htm

The Cubesats have received IARU Coordination for operation on the following frequencies:

+ AlmaSat-1 437.465 MHz 1200 bps FSK, 2407.850 MHz
- E-St@r 437.445 MHz 1200 bps AFSK (no reception report)
+ Goliat 437.485 MHz 1200 bpx AFSK
+ Masat-1 437.345 MHz 625/1250 bps GFSK, CW
+ PW-Sat 145.900 MHz 1200 bps BPSK AX25, CW
- Robusta 437.325 MHz 1200 bps FM (no reception report)
+ UniCubeSat 437.305 MHz 9600 bps FSK
+ XaTcobeo 437.365 MHz FFSK with AX.25

AMSAT-Francophone has posted a windows and linux version of a telemetry decoder for the French student ROBUSTA amateur satellite at:
http://www.amsat-f.org/site/spip.php?article24

When PW-Sat has finished its primary scientific mission it will be reconfigured as a 435/145 MHz FM to DSB transponder for general amateur radio communications. The FM to Double Sideband transponder was first pioneered by amateurs on the satellite AO-16.

The Masat-1 satellite team have made available software to decode their 437.345 MHz GFSK telemetry data via a PC sound card. The software can be downloaded from:
http://cubesat.bme.hu/en/foldi-allomas/kliens-szoftver/

XaTcobeo got a mention on Spanish TV news, see:
http://www.youtube.com/watch?v=mdVt8P1gzfY (in Spanish)

[ANS thanks the Vega Cubesat Teams, AMSAT-UK, and radio amateurs worldwide for the above information]

MASAT-1 Designated MagyarSat-OSCAR-72 (MO-72)

OSCAR Number Administrator Bill Tynan, W3XO reports, "Congratulations on the successful launch of the MaSat-1 Cubesat that the team at Budapest University of Technology and Economics have been responsible for designing, building and testing. Since you have met all of the requirements for being issued an OSCAR number, including coordination through IARU and requesting an OSCAR number, I, under authority vested in me by the President of AMSAT-NA, do hereby name MaSat-1 as MagyarSat-OSCAR-72 or MO-72."

Bill concludes, "I, and all at AMSAT-NA wish MagyarSat-OSCAR-72 great success in fulfilling all of its mission objectives."

[ANS thanks OSCAR Number Administrator Bill Tynan, W3XO for the above information]

Satellite Shorts From All Over

+ Congratulations to John Papay K8YSE for reaching 1006 confirmed grids for his satellite VUCC award!

+ Joseph Armbruster, KJ4JIO is working on an analysis of ARISSat-1 keplerian element data. He has posted his initial graphic plots of the data at: http://tinyurl.com/KJ4JIO-Analysis
Joe plans to extend this analysis in the future to include correlation of orbit with temperature, eclipses, etc.

+ ARISS news is available on Twitter. The ARISS twitter account ARISS_status has just surpassed the 1000 followers mark.
See: http://twitter.com/ARISS_status

+ Special John Glenn ARISS Contact with Perth, Australia to celebrate the 50th Anniversary of "The City of Lights" will carried live via internet streaming, Monday, February 20 at 10:23 UTC:

- EchoLink *AMSAT* (101377) and *JK1ZRW* (277208) servers
- IRLP Node 9010 Discovery Reflector

+ AMSAT-DL received a certificate of appreciation from Japan's UNITEC-1 flight to Venus together with AKATSUKI (Venus Climate Orbiter): http://tinyurl.com/UNITEC-Award (amsat.org).

+ Reminder that the QSL Manager for the K7UGA Barry Goldwater Special Event stations sponsored by CADXA is Bob Davies, K7BHM (qrz.com) with an SASE. A video showing K7UGA satellite operation has been posted by Patrick WD9EWK at:
http://www.youtube.com/watch?v=790OQThYtX0

+ Yuri, UT1FG/MM has been making satellite contacts in range of North America. John, K8YSE has prepared an excellent "working Yuri" primer for those trying to make a contact with UT1FG/MM:
http://www.papays.com/sat/general.html (scroll down about 1/4 way down the web page).

+ AMSAT Keeper of the Keps, Ray Hoad, WA5QGD says that SumbandilaSat (SO-67, Cat# 35870) has been added back into the Keplerian Element set distribution in light of published plans of recovery of SO-67 for amateur radio operation.

+ The 2012 AMSAT Space Symposium and Annual Meeting dates have been set for Oct 26-28, 2012 at the Holiday Inn Orlando Airport. More details as they become available.

+ NASA and the American Physical Society have entered into a partnership to share unique videos from the International Space Station with students, educators and science fans around the world. NASA astronaut Don Pettit will use everyday objects from Earth to demonstrate physics through the "Science off the Sphere" video series. Watch the first video at http://www.physicscentral.com/explore/sots/ (NASA Education Express)

+ Astronaut Nicole Stott posted an image of Egypt on her Twitter account: http://tinyurl.com/pyramids-from-ISS. If you can spot the Great Pyramids at Giza in this small image, you've pretty good eyesight! Click the image for a larger version of the image if can't find them. (UniverseToday.com)

+ DX News Reports say that Gabon, TR, will be activated by Sebastien, F4EIH, who will be in Gabon for at least three years starting on 1 February. He plans to operate SSB, PSK31 and JT65 on the HF and VHF (EME and Satellite) bands. (425 DX News)

+ Enjoy the view out the window aboard the ISS as you fly over the US East Coast at night: http://tinyurl.com/ISS-Over-EastCoast. At the end of the video you can click on the icons to fly over other places. (UniverseToday.com)

+ Cornell/JA/MIT are organizing the 1st Interplanetary CubeSat Workshop. The conference will be held at the end of May this year at MIT. Abstracts are now being accepted for technical talks. The event website describing keynote speakers, program details and other information can be accessed at: http://www.iCubeSat.org

+ Historical Note: 26 years ago on February 19, 1986 the Mir Space Station was launched. It was assembled in orbit from 1986 to 1996. It was deorbited on March 21, 2001.

[ANS thanks everyone for the above information]

/EX

In addition to regular membership, AMSAT offers membership in the President's Club. Members of the President's Club, as sustaining donors to AMSAT Project Funds, will be eligible to receive additional benefits. Application forms are available from the AMSAT Office. And, with that, please keep in mind the size of the universe: Light from the sun takes 8 minutes to reach you. When you look at the Andromeda galaxy the light

you are seeing took 2.3 million years to reach you. If the sun were the size of a dot on an ordinary-sized letter 'i', then the nearest star would be 10 miles away.

73,
This week's ANS Editor,
JoAnne Maenpaa, K9JKM
K9JKM at amsat dot org

38. Weekly Highlights of Solar and Geomagnetic Activity, 13 - 19 February 2012

Newsgroup: rec.radio.amateur.space
Date: 2012-02-22 00:30:08 UTC
From: SWPC.Webmaster@noaa.gov
Message-ID: <20120222003002.1A02933C4A@panix2.panix.com>
Source record: 188
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.dx,rec.radio.amateur.space,rec.radio.shortwave,rec.radio.info

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:Product: Weekly Highlights and Forecasts
:Issued: 2012 Feb 21 2202 UTC
# Prepared by the US Dept. of Commerce, NOAA, Space Weather Prediction Center
# Product description and SWPC contact on the Web
# http://www.swpc.noaa.gov/weekly.html
#
# Weekly Highlights and Forecasts
#
Highlights of Solar and Geomagnetic Activity
13 - 19 February 2012

Solar activity was very low to low all week. The largest flare of
the entire period was a C1 on 19 February at 0851 UTC from Region
1422 (N15, L=177, class/area = Dai/60 on 19 February). B-class
flares dominated the rest of the summary period.

No proton events were observed at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit was at
normal to moderate levels during the summary period.

Geomagnetic activity began on 13 February with quiet to unsettled
conditions at mid latitudes and active to minor storm levels at high
latitudes, associated with a small coronal hole high speed stream
(CH HSS). 14 February saw a brief return to quiet conditions. The
respite was short-lived, however, when a slow CME observed on 10
February finally arrived at Earth on 15 February. Active to minor
storm levels were observed at mid latitudes throughout the day,
while high latitude activity peaked at major storm levels. The
remainder of the week was quiet until late on 18 February when a
co-rotating interaction region preceded a geoeffective CH HSS.
Unsettled to active conditions with isolated minor storm periods
were observed during 19 February due to CH HSS effects.

Forecast of Solar and Geomagnetic Activity
22 February - 19 March 2012

Solar activity is expected to be at low levels throughout the
forecast period.

No proton events are expected at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit is
expected to be at high levels to begin the period due to effects
from a recurrent CH HSS. Normal to moderate levels are expected to
prevail from 23 February - 19 March.
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Geomagnetic field activity is expected to be mostly quiet on 22 February. Quiet to unsettled conditions are expected on 23 - 25 February due to the onset of a recurrent CH HSS. A return to mostly quiet levels is expected on 26 February through 01 March. A CH HSS is expected to become geoeffective on 02 - 03 March, thus increasing activity to quiet to unsettled levels. Predominately quiet conditions are expected from 04 - 06 March before another CH HSS provides unsettled conditions on 07 March. Conditions are expected to return to mostly quiet levels from 08 March - 10 March, before another recurrent CH HSS is expected to become geoeffective on 11 March, with unsettled conditions expected for the day. A return to mostly quiet conditions is forecast from 12 - 16 March, before another CH HSS is expected to produce quiet to unsettled conditions with a chance for isolated active to minor storm levels at high latitudes for the remainder of the period.

** Attention ** Beginnning Monday, March 12, 2012, the Weekly bulletin will now be issued and available on the SWPC web page every Monday morning by 1500 UTC.

39. ANS-057 AMSAT News Service Weekly Bulletins

Newsgroup: rec.radio.amateur.space
Date: 2012-02-27 20:07:21 UTC
From: JoAnne Maenpaa <k9jkm@comcast.net>
Message-ID: <002101ccf58b$66245c60$326d1520$@net>
Source record: 189
Cross-posted to: rec.radio.amateur.space,rec.radio.info

AMSAT NEWS SERVICE
ANS-057

ANS is a free, weekly, news and information service of AMSAT North America, The Radio Amateur Satellite Corporation. ANS reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in designing, building, launching and communicating through analog and digital Amateur Radio satellites.

Please send any amateur satellite news or reports to:
ans-editor@amsat.org

In this edition:
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* AA5UK Announces Plans for Hawaii Satellite Operation
* Satellite DX: XF1AA on Isabel Island
* Volunteers Needed for AMSAT at Timonium, MD on March 31
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SB SAT @ AMSAT $ANS-057.01
ANS-057 AMSAT News Service Weekly Bulletins

AMSAT News Service Bulletin 036.01
From AMSAT HQ SILVER SPRING, MD.
February 5, 2012
To All RADIO AMATEURS
BID: $ANS-036.01

AMSAT Theme at Dayton 2012: Running with Fox

The 2012 Dayton Hamvention will be held this year on 18 - 20 May 2012. As has been the case for the many years Hamvention will be at the Hara Arena Complex on the north side of Dayton. AMSAT will occupy the same booths (444-449) in Ball Arena, right across from the ARRL area and just inside the door from the Satellite Demonstration area.

The AMSAT theme for 2012 is "Running with Fox". We will have multipe exhibits of the new AMSAT satellite on display.

Visit AMSAT's Dayton Hamvention page for all details on activities:
http://www.amsat.org/amsat-new/hamvention/2012/Dayton.php

Some of the activities will include:

+ Life size Fox models will be on display as well as diagrams of the modules inside the 10cm square satellite.

+ Operational prototype of ARISSat-1 on display.

+ AMSAT Thursday Night Get-together at the Tickets Pub & Eatery.

+ The sixth annual AMSAT/TAPR Banquet will be Friday night May 18 at the Kohler Banquet Center. The price for the Banquet is $30. Seating is limited and reservations are required. Follow the links on AMSAT's Dayton page.

+ The AMSAT Forum will be on Saturday May 19.

AMSAT has a limited block of rooms reserved at the Country Inn & Suites in Fairborn, OH. Please contact Martha at the AMSAT office for room price and availability during Hamvention. Priority for rooms will be given to those volunteering to work in the AMSAT booth for multiple 2 hour shifts during Hamvention. The hotel web page is: http://www.amsat.org/amsat-new/hamvention/2012/Hotel.php

The phone number for the AMSAT office is 301-589-6062. Other hotels in the immediate area of the Country inn & Suites include the Fair-field Inn, Ramada Inn, Hampton Inn, Fairborn Holiday Inn, Red Roof Inn and the Homewood Suites if additional accommodations are needed.

Further information on Hamvention 2012, including advance ticket sales and motel accommodations, can be found at http://www.hamvention.org.

ARISS School Events Now Number Over 700

ARISS Operation Team Mentor Charlie Sufana, AJ9N reports that the total number of ARISS ISS-to-Earth school events is now at 701. ARISS offers an opportunity for students to experience the excite-ment of Amateur Radio by talking directly with crewmembers on-board the International Space Station.

Teachers, parents and communities see, first hand, how Amateur Radio and crew members on ISS can energize youngsters' interest in science, technology, and learning.

ARISS is an international educational outreach program partnering the participating space agencies, NASA, Russian Space Agency, ESA, CNES, JAXA, and CSA, with the AMSAT and IARU organizations from participa-ting countries. Further information on the ARISS program is available on the website http://www.ariss.org/ (graciously hosted by the Radio Amateurs of Canada).

The 700th school event was with The Academy@Shawnee City in Louisville, Kentucky via a telebridge contact with ON4ISS on February 14. ARISS says the special John Glenn event to commemorate the 50th anniversary of Perth, City of Lights was successful on February 20. This marked

event number 701.

Planned school contacts for this coming week include:

+ ESA-ESTEC, Noordwijk, Netherlands, telebridge via IK1SLD. The schools that are involved are: American school of The Hague, International School of Amsterdam, and The British School in the Netherlands on Monday, February 27 at 12:45:29 UTC.

+ Parkside Elementary, Atlanta, GA, telebridge via K6DUE on Friday, March 3 at 16:42:29 UTC.

+ 5th Geniko Lykeio Katerinis, Katerini, Greece, direct via SX2ISS on Friday, March 3 at 17:03:52 UTC.

Each contact may have multiple schools sharing the same time slot. A list of all of the ARISS School Events can be found at: http://tinyurl.com/ARISS-Events

[ANS thanks ARISS Operation Team Mentor Charlie Sufana, AJ9N for the above information]

ESA Reports Vega Cubesat Success

The ESA provided a summary of the success of the cubesats launched on the Vega mission on February 13. The web report said, "Shortly after the seven ESA student CubeSats started their adventure in space on board the Vega launcher yesterday, the university teams and radio amateurs all around the world pointed their 'ears' towards space and started to receive the first signs of life from the tiny spacecraft."

+ The Spanish XaTcobeo CubeSat was heard a couple of hours after launch (13 February 2012, 11:00 CET) during its first pass over the University of Vigo's ground station, and its signal was also tracked by many radio amateurs. The first data received show that the satellite's batteries are properly charged and that telemetry and telecommand systems work well, representing a very promising start for the mission.

+ The Hungarian team received the first signals from Masat-1 from a radio amateur in Florida less than two hours after launch, and by many others shortly after. A couple of hours later the team's ground station in Budapest gathered the first 'official' satellite data which confirmed that the spacecraft is in perfect shape.

+ PW-Sat, the Polish student CubeSat, was also heard loud and clear only a few hours after the launch. The signals have been heard both by the team's ground station and by several radio amateurs from the UK, India, Germany and the Netherlands.

+ The Italian UniCubeSat-GG team heard the first signals from the satellite, although they have not been decoded yet, shortly after

launch, first from a Kentucky (US) ground station and then from the dedicated Rome ground station.

+ Initially weak signals were reported from the Italian e-st@r. On February 15 the e-st@r team reported signals from their CubeSat heard by their control ground station and other ham radio stations.

+ Weak signals have been received so far from the Romanian Goliat and the French Robusta CubeSats. These teams currently believe that their spacecraft may not have yet achieved a stable orientation after separation and sufficient battery charge level in order for their communication systems and antennas to transmit properly to the ground station. The situation will evolve in the course of the next several days, and further attempts to establish good communications links with those satellites will continue.

A joint effort from all CubeSat teams and radio amateurs from the AMSAT network has now started, in order to be able to clearly detect the satellites.

The full ESA report can be found on-line at:
http://www.esa.int/SPECIALS/Education/SEMR2ZYXHYG_0.html

[ANS thanks the ESA for the above information]

MASAT-1 (MO-72) Team Releases Software and Web Page Updates

The MASAT-1 team said this week that updated client software for telemetry reception and decoding is available on their web at:
http://cubesat.bme.hu/en/radioamatoroknek/kliens-szoftver/

Some of the upgrades include:
+ The "Offline" label removed, the status of the automatic packet reporting is displayed.

+ Battery voltage constant (on the EPS panel) updated.

+ User selection between 626/1250 bps decoding.

+ The waterfall display shows tracks for the 0, CW and 1. The decoder has been reported to be most successful if tuning is set upward by 50-100 Hz from the tuning indicators. User experiences are invited to be sent to mezei@cubesat.bme.hu.

The automated received packet upload from the client software has been updated to accept ham@cubesat.bme.hu or a@a.a as mail address for those not wishing to send their actual address. Users can change the e-mail address by editing the registration.txt file in the program folder of the software package.

A statistics web page reporting on the numbers of packets forwarded by amateur radio operators has been added:
http://cubesat.bme.hu/en/radioamatoroknek/veteli-statisztika/

The site has successfully received over 50000 packets from around the world. The latest updates to the web and client software should address initial concerns that 'no packets' have been received.

The MASAT-1 team thanks amateur radio operators for your outstanding support. The MASAT-1 Important News for Radio Amateurs page is at: http://cubesat.bme.hu/en/2012/02/19/fontos-hirek-radioamatoroknek/

The MASAT-1 mission home page is: http://cubesat.bme.hu

[ANS thanks the MASAT-1 Team for the above information]

Dedicated CubeSat Radio Spectrum Discussed at WRC-12

AMSAT-UK reports on their web that the recently concluded WRC-12 conference agreed to a resolution by the SmallSat, CubeSat, and NanoSatellite community for dedicated spectrum allocation outside of the 435 to 437 MHz amateur satellite band.

Wouter Jan Ubbels, PE4WJ with the Dutch space development company ISIS says he was able to introduce a resolution at WRC-12 submitted by a number of countries, led by the Netherlands to propose an agenda item for WRC-2015 to conduct studies to identify the spectrum needs of nano-and picosatellites, and furthermore to study the associated regulatory constraints.

After the discussions at WRC-12, the resolution received partial acceptance to begin study of the regulatory aspects for WRC-2018.

Wouter concluded, "This is very good news, and could mean that the ITU notification process for nano-and picosatellites can become greatly simplified in the future. We first of all would like to thank all the supporting administrations for their support and would like to invite the community to, through their administrations, participate in the studies, so that the outcome will be as much as possible line with the needs of the community. We will continue to work on this subject and keep you updated through these lists and at the various small / nano / picosatellite conferences and workshops."

The full news item can be viewed on the AMSAT-UK web at: http://www.uk.amsat.org/4950

[ANS thanks Wouter Jan Ubbels, PE4WJ and AMSAT-UK for the above information]

Arizona Centennial Event K7UGA Station Reports 122 Satellite QSOs

Arizona AMSAT Area Coordinator, Patrick Stoddard, WD9EWK/VA7EWK and Tom Kramer, NQ7R provided the satellite contacts for the K7UGA special-event station. K7UGA was sponsored by the Central Arizona DX

Association in its commemoration of the Arizona statehood centennial.

Patrick reported, "Between Tom NQ7R and myself, we made 122 satellite contacts. Tom worked his passes from his home in Casa Grande AZ (grid DM42). For passes I worked at the start of the week through Thursday afternoon, I operated from DM43 in the Phoenix area. For the passes I worked Friday and Saturday, I was at the Yuma Hamfest. On Sunday morning, I parked next to the Yuma Territorial Prison State Historic Park overlooking the Colorado River. Both Yuma sites are in grid DM22."

Patrick posted videos of his K7UGA operation:

+ SO-50 pass on Friday (17 February) morning at 1751 UTC:
http://www.youtube.com/watch?v=BKaIKgjuSMM

+ AO-27 pass on Friday afternoon at 2032 UTC:
http://www.youtube.com/watch?v=AIA_VANTdpQ

+ AO-27 pass on Saturday (18 February) afternoon at 2004 UTC:
http://www.youtube.com/watch?v=YiXTjgD5nD8

+ VO-52 pass on Sunday (19 February) morning at 1538 UTC:
http://www.youtube.com/watch?v=l0AAB3A7Xy4

The K7UGA page on QRZ.com states that all QSL card requests be sent with SASE to: K7BHM, 1623 N. Los Altos Ct., Chandler, AZ 85224-8357.

[ANS thanks Arizona AMSAT Area Coordinator, Patrick Stoddard, WD9EWK/VA7EWK for the above information]

AA5UK Announces Plans for Hawaii Satellite Operation

Adrian Engele, AA5UK says he will be traveling to Hawaii between March 21 and April 4. This is primarily a vacation trip for sightseeing and scuba diving but satellite operation is also planned.

He will try to get on the satellites as often as his schedule permits within vacation activities. His primary focus will be on FO-29, VO-52 and AO-7 Mode B passes. SO-50 and AO-27 may be attempted if conditions permit.

+ March 21 - Fly from Chicago to Honolulu and Hilo.
+ March 22-25 - Operation from south of Hilo.
+ March 26 - April 1 - Kailua-Kona, Big Island in Hawaii.
+ April 2 - April 4: Oahu, Waikiki beach.

Adrian invites you to stay tuned via AMSAT-BB and his Twitter feed @AA5UK for latest schedule information. He will also update his page on QRZ.com in the coming weeks with additional information.

[ANS thanks Adrian Engele, AA5UK for the above information]

Satellite DX: XF1AA on Isabel Island

The OPDX Bulletin 1050 is reporting that a team of 10 operators, from the Aguas-Calientes Amateur Radio Club will activate Isabel Island, grid DL71, using the callsign XF1AA. The planned dates are March 16th through the 21st.

Ismael, XE1AY, is one of the operators and is active on the satellites. If you should hear Ismael on the birds, please give him the airtime to work as many as he can. Good luck with the operation!

[ANS thanks John Papay, K8YSE for the above information]

Volunteers Needed for AMSAT at Timonium, MD on March 31

Pat Kilroy, N8PK says that volunteers are needed to staff the AMSAT display and for satellite operating demonstrations at the Greater Baltimore Hamboree and Computerfest on Saturday, March 31 in Timonium, Maryland. This event is one of the largest Amateur Radio and technology shows on the East Coast.

In addition to the AMSAT display and satellite demonstrations Pat is planning to show the FUNcube Dongle and present show'n'tell talks for visitors to the AMSAT booth.

Please contact Pat soon by e-mail (pat@patkilroy.com) if you can help!

For more info about the hamfest visit: http://www.gbhc.org/

[ANS thanks Pat Kilroy, N8PK for the above information

ARISS Status Report - 20 February 2012

1. Kochi Youth Radio ISS Astronaut

Kochi Gakuen Kochi Junior High School in Kochi, Japan experienced a successful Amateur Radio on the International Space Station (ARISS) contact on Monday, February 13. Students asked Dan Burbank, KC5ZSX, 11 questions about living in space. The contact was integrated into the science curriculum. Media coverage included three television stations and three newspapers.

2. Astronaut Dan Burbank Speaks with Louisville Students

On Tuesday, February 14, youth attending The Academy @ Shawnee participated in an Amateur Radio on the International Space Station (ARISS) contact with on-orbit astronaut Dan Burbank, KC5ZSX via telebridge station ON4ISS in Belgium. The contact took place at the Challenger Learning Center in Louisville, Kentucky with the assistance of the Louisville Astronomical Society. Approximately 40 people were in attendance and listened as Burbank chatted with students about experiments on board the ISS and the effect space has on

the human body, among other topics. The Academy, an inner city high school of 500 students, has been designated as the Aerospace Magnet School for Jefferson County Public Schools. The contact was part of a comprehensive education plan to pique students' interest in Science, Technology, Engineering and Math.

3. Astronaut Training Status

Astronaut Alexander Gerst passed his amateur radio license exam on February 13 and is waiting for his callsign to be assigned. He is scheduled to fly with Expedition 40 in May 2014.

An introductory session is planned for Gregory Wiseman, KF5LKT (Expedition 40, May 2014) on Monday, February 27 and a preflight session is scheduled for Expedition 32 astronauts Sunita Williams, KD5PLB and Akihiko Hoshide, KE5DNI on Monday, March 5. Williams and Hoshide will fly later this year.

[ANS thanks Carol, KB3LKI, for the above information]

/EX

In addition to regular membership, AMSAT offers membership in the President's Club. Members of the President's Club, as sustaining donors to AMSAT Project Funds, will be eligible to receive additional benefits. Application forms are available from the AMSAT Office.

73,
This week's ANS Editor,
Lee McLamb, KU4OS

40. Weekly Highlights of Solar and Geomagnetic Activity, 20 - 26 February 2012

Newsgroup: rec.radio.amateur.space
Date: 2012-02-28 20:30:06 UTC
From: SWPC.Webmaster@noaa.gov
Message-ID: <20120228203002.3BDD933C52@panix2.panix.com>
Source record: 190
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.dx,rec.radio.amateur.space,rec.radio.shortwave,rec.radio.info

```
:Product: Weekly Highlights and Forecasts
:Issued: 2012 Feb 28 1652 UTC
# Prepared by the US Dept. of Commerce, NOAA, Space Weather Prediction Center
# Product description and SWPC contact on the Web
# http://www.swpc.noaa.gov/weekly.html
#
# Weekly Highlights and Forecasts
#
Highlights of Solar and Geomagnetic Activity
20 - 26 February 2012

Solar activity was at very low to low levels. Regions 1421 (N18,
L=133, class/area = Cro/30 on 20 February) and 1422 (N15, L=177,
class/area = Dsi/330 on 21 February) each produced isolated C-class
activity, the largest a C4 at 20/0509 UTC from Region 1421. The most
significant event of the period was a filament eruption from the
northeast quadrant early on 24 February associated with an
Earth-directed coronal mass ejection (CME).

No proton events were observed at geosynchronous orbit. An
enhancement of the greater than 10 MeV proton flux at geosynchronous
orbit began around 25/0300Z and continued through the remainder of
the period (peak flux of 4.6 pfu at 26/0055 UTC). The enhancement
was associated with the filament eruption observed on 24 February.

The greater than 2 MeV electron flux at geosynchronous orbit
increased from normal to high levels during 20 - 22 February due to
effects from a coronal hole high speed stream (CH HSS). Fluxes
decreased to mostly moderate levels during 23 - 26 February.

Geomagnetic field activity was at unsettled to active levels with
minor to major storm periods at high latitudes due to CH HSS
effects. Activity decreased to quiet to unsettled levels on 21
February as CH HSS effects subsided. Quiet to unsettled levels were
observed on 22 February with active periods at high latitudes due to
the onset of another CH HSS. Activity dropped to mostly quiet levels
on 23 February as CH HSS effects subsided. Mostly quiet to unsettled
levels occurred during the remainder of the period (24 - 26
February) with the exception of isolated active to major storm
levels at high latitudes on 25 February. A Sudden Impulse (19 nT)
was observed on 26 February marking the arrival of the 24 February
CME.

Forecast of Solar and Geomagnetic Activity
29 February - 26 March 2012
```

Solar activity is expected to be very low to low during the forecast period.

No proton events are expected at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit is expected to be at normal to moderate levels from 29 February - 17 March. Flux is expected to increase to moderate to high levels on 18 - 19 March due to effects from a recurrent CH HSS. Predominately normal to moderate levels are expected for the remainder of the period.

Geomagnetic field activity is expected to begin with quiet to unsettled levels on 29 February as effects from the 24 February CME subside. Predominately quiet levels are expected during the forecast period. However, unsettled conditions are likely on 02, 05 - 07 and 11 March due to weak CH HSS effects and unsettled to active conditions are expected on 17 - 20 March due to a more prominent recurrent negative polarity CH HSS.

41. Crossposting Permitted to rec.radio.amateur.moderated

Newsgroup: rec.radio.amateur.space
Date: 2012-03-01 07:00:02 UTC
From: rram@panix.com
Message-ID: <radio/ham-radio/moderated/crossposting-1-1330585201@panix.com>
Source record: 191
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space,rec.radio.info

```
Posted-By: auto-faq 3.3.2 beta (PGPMoose V2.0, Perl 5.005)
Archive-name: radio/ham-radio/moderated/crossposting
Revision: 1.2 2011/11/02 04:08:53
Posting-Frequency: posted monthly
URL: http://www.panix.com/~rram/usenet/rram/index.html

Changes followed by "|".

After a 30-day public discussion and feedback period to gauge reader
opinions in March of 2009:

http://groups.google.com/group/rec.radio.amateur.moderated/browse_thread/thread/d7d337db35
f23326

the rec.radio.amateur.moderated Moderation Team had decided to consider |
amending its charter, and permit limited simultaneous crossposting to
rec.radio.amateur.moderated and one other unmoderated
amateur-radio-related discussion newsgroup. After a successful trial |
period (90 days, through early July 2009), we decided to adopt this |
change permanently. |

Approved rec.radio.amateur.* newsgroups are those that are currently
listed in the latest version of the "List of Big Eight Newsgroups" which
is crossposted monthly to news.announce.newgroups, news.groups, and
news.lists.misc.

Approved alt.radio.amateur.* and alt.ham-radio.* newsgroups are those
that have been created consistent with the suggestions in "So You Want
to Create an Alt Newsgroup" at:

http://www.faqs.org/faqs/alt-creation-guide/

Approved regional hierarchy newsgroups are those that contain either
"radio.amateur" or "ham-radio" in their names, including
uk.radio.amateur and aus.radio.amateur.misc.

We will make every reasonable effort to keep our list of approved
newsgroups up-to-date. In case we have overlooked any, and a submission
is rejected in error as a result, the rejected submitter can E-mail us
at our administrative contact address (in the signature at the bottom of
this article, and the default Reply-To for the rejection message)
requesting that it be added, and that the article be approved. We may
still choose to reject articles crossposted to any alt.* newsgroup with
an inappropriate name, including obscene language, embedded
name-calling, or encouragement of unlawful conduct.
```

Please direct any comments, questions, or criticisms to
rec-radio-amateur-moderated-request@panix.com.

42. ANS-064 AMSAT News Service Weekly Bulletins

Newsgroup: rec.radio.amateur.space
Date: 2012-03-04 15:22:47 UTC
From: JoAnne Maenpaa <k9jkm@comcast.net>
Message-ID: <000601ccfa1a$a27df840$e779e8c0$@net>
Source record: 192
Cross-posted to: rec.radio.amateur.space,rec.radio.info

AMSAT NEWS SERVICE
ANS-064

ANS is a free, weekly, news and information service of AMSAT North America, The Radio Amateur Satellite Corporation. ANS reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in designing, building, launching and communicating through analog and digital Amateur Radio satellites.

Please send any amateur satellite news or reports to:
ans-editor@amsat.org

In this edition:

* AMSAT Plans at Dayton 2012
* W4PUJ, Dick Daniels Memorial Video Posted
* COMPASS-1 Satellite End of Mission
* VO-52 Not Heard
* Satellite Special Events Announced
* Coverage of Next Cubesats on AMSAT-UK Web
* April 18 World Amateur Radio Day 2012 - 50 Years in Space
* ARISS Status Report February 27, 2012

SB SAT @ AMSAT $ANS-064.01
ANS-064 AMSAT News Service Weekly Bulletins

AMSAT News Service Bulletin 064.01
>From AMSAT HQ SILVER SPRING, MD.
March 4, 2012
To All RADIO AMATEURS
BID: $ANS-064.01

AMSAT Theme at Dayton 2012: Running with Fox

The 2012 Dayton Hamvention will be held this year on 18 - 20 May 2012. As has been the case for the many years Hamvention will be at the Hara Arena Complex on the north side of Dayton. AMSAT will occupy the same booths (444-449) in Ball Arena, right across from the ARRL area and just inside the door from the Satellite Demonstration area.

The AMSAT theme for 2012 is "Running with Fox". We will have multiple exhibits of the new AMSAT satellite on display.

Visit AMSAT's Dayton Hamvention page for all details on activities:
http://www.amsat.org/amsat-new/hamvention/2012/Dayton.php

Some of the activities will include:

+ Life size Fox models will be on display as well as diagrams of
the modules inside the 10cm square satellite.

+ Operational prototype of ARISSat-1 on display.

+ AMSAT Thursday Night Get-together at the Tickets Pub & Eatery.

+ The sixth annual AMSAT/TAPR Banquet will be Friday night May 18
at the Kohler Banquet Center. The price for the Banquet is $30.
Seating is limited and reservations are required. Follow the
links on AMSAT's Dayton page.

+ The AMSAT Forum will be on Saturday May 19.

AMSAT has a limited block of rooms reserved at the Country Inn & Suites
in Fairborn, OH. Please contact Martha at the AMSAT office for room
price and availability during Hamvention. Priority for rooms will be
given to those volunteering to work in the AMSAT booth for multiple 2
hour shifts during Hamvention. The hotel web page is:
http://www.amsat.org/amsat-new/hamvention/2012/Hotel.php

The phone number for the AMSAT office is 301-589-6062. Other hotels in
the immediate area of the Country inn & Suites include the Fair- field
Inn, Ramada Inn, Hampton Inn, Fairborn Holiday Inn, Red Roof Inn and the
Homewood Suites if additional accommodations are needed.

Further information on Hamvention 2012, including advance ticket sales
and motel accommodations, can be found at http://www.hamvention.org.

Dick Daniels, W4PUJ Memorial Service Video Posted

Bob McGwier, N4HY has posted a video of the February 25 memorial service
attended by family, friends, and colleagues for AMSAT's Dick Daniels,
W4PUJ who passed away on February 14, 2012:

http://youtu.be/pGhn1eC52Wo

AMSAT President Barry Baines, WD4ASW read excerpts from the obituary
written by Jan King, W3GEY/VK4GEY and included personal comments of his
experience knowing Dick and working with him. The text of Dick's
obituary is posted on the AMSAT web at:
http://tinyurl.com/W4PUJ-Obituary.

Barry observed in his comments at the memorial service that NASA
announced AMSAT Fox-1 satellite's acceptance into their ELaNa launch
program on February 14, the day Dick passed away. Dick's legacy for
amateur radio in space will continue.

Bob recalled, "Dick was always supportive and helpful to me and like all
who knew him, understand the size of our loss. Dick was the epitome of
solidarity, always honoring his obligations, with a big sense of
responsibility with no obvious sense of entitlement to anyone's thanks.
Dick was always seemingly asking himself 'what have I done for you
lately?' We've lost the irreplaceable."

Eric Rosenberg, W3DQ wrote of his memories of Dick, "He was a great guy, wonderful to work with, both professionally and within AMSAT. He was treasure trove of information and defined corporate knowledge and memory. His collection of Oscar 10 telemetry on those hard sectored disks was legendary around here, but not as much as his pool table, upon which many of the early satellites were put together."

Bob, N4HY took a collection of photographs with his phone camera which has added to his online album:
http://n4hy.smugmug.com/AMSAT/Dick-Daniels-W4PUJ-Memorial

[ANS thanks Bob McGwier, N4HY, Eric Rosenberg, W3DQ, Jan King W3GEY/ VK4GEY, and AMSAT President Barry Baines, WD4ASW for the above information]

COMPASS-1 Satellite End of Mission

The COMPASS-1 CubeSat was designed and built by students from the Aachen University of Applied Sciences in Aachen, Germany. It has been in orbit since its launch from India on April 28, 2008.

This week Mike Rupprecht, DK3WN reported on his DK3WN SatBlog that on Saturday, February 25 a single beacon was received. COMPASS-1 underwent a complete restart and the thresholds for heater and battery voltages were set to new levels. Battery temperatures tracked with the received telemetry data have shown some very cold spikes. This may be affecting operation of the satellite.

On March 3, Mike received the following message from Professor Dr. Bernd Dachwald, Faculty of Aerospace Engineering FH Aachen at the University of Applied Sciences:

Dear supporters and friends of our COMPASS-1 mission,

First, let me thank you very much for your support in trying to save the life of our COMPASS-1 satellite during the last days, but also during the last years of "routine" operations.

It seems that our mission now comes to an end. The projected lifetime of COMPASS-1 was half a year. The tiny guy has outperformed this value by a factor of more than seven. April 28th would have been its 4th birthday and if it was a human, it would now be about 500 years old (Cubesat-years are short).

So, if you have more important things to do (and I guess so), we cannot expect you to continue your efforts in saving its live. With your support, you have made things possible that we would never have been able to achieve with our own resources and I appreciate your support very much.

So, COMPASS-1, rest in peace. (Nevertheless, if you still want to try to awake it from the dead, feel free to do so.)

I hope that we will soon be able to build and launch COMPASS-2
and that you will be still available, all over the world, as a
ground station to command and fly our new bird. We will keep
you informed.

Cheers and thanks for all,
Bernd

Operators may periodically listen for the COMPASS-1 CW beacon on
437.275 MHz CW beacon every 3 minutes. Any reports are very
appreciated.

The DK3WN SatBlog tracked monitoring and attempts at recovery
over the past week:

+ On Sunday, February 26 no signals were heard from COMPASS-1
+ On Monday, February 27 no signals were heard; Several attempts to
reset the satellite were unsuccessful.
+ On Tuesday, February 28 first report received after nothing heard
for two days. Decoded telemetry showed the satellite had reset.
Control stations reset voltage and heater thresholds to conserve
power:

Power Level Critical Battery Capacity
Heater Active Battery Heater ON
Power Safe Counter 0 <? Counters reset to 0
Emergency Mode Counter 0
Battery Voltage 2.82 V
Battery Current 0.00 mA
Battery Temperature 0 ?C <??attery temperature
COLD!

The usual operational threshold is for the heater to be on if the
temperature inside goes under 10 deg. The batteries are weak and
this has caused COMPASS-1 crash.

+ On Wednesday, February 29 Alan, ZL2BX could command COMPASS at
19:25 UTC - all thresholds commands were accepted. COMPASS went
into eclipse at 19:45 and into sunlight at 20:17 UTC. DK3WN set
the thresholds at 20:20 UTC and got an confirmation beep for all
commands. COMPASS is now in Emergency Mode and the beacon inter-
val is 8 minutes. The heater is OFF which will help improve the
voltage problem. Since all counters are zero it is assumed that
COMPASS resets in every eclipse. Not sure if the threshold values
are kept after reset during eclipse.

Power Level Critical Battery Capacity
Heater Active Battery Heater OFF <?Command worked!
Power Safe Counter 0 <? Counters still reset to 0
Emergency Mode Counter 0
Battery Voltage 2.82 V
Battery Current 0.00 mA
Battery Temperature 3 ?C <??attery warming up

(refer to: http://www.dk3wn.info/p/?p&334)

Please continue to monitor 437.275 MHz for the COMPASS-1 CW beacon.
Current status can be read on-line on the DK3WN SatBlog at:
http://www.dk3wn.info

Mike has written telemetry decoders for several satellites, including
COMPASS-1. These may be found at: http://www.dk3wn.info/software.shtml

[ANS thanks Mike Rupprecht, DK3WN for the above information]

VO-52 Not Heard

Reports have been posted that India's VO-52 HAMSAT satellite, launched
on May 5, 2005 from India, has not been heard during expected passes
since February 28.

Summaries from stations monitoring for VO-52 cam be viewed at:
http://oscar.dcarr.org/

AMSAT INDIA Secretary Nitin, VU3TYG, posted on February 29 their last
known status, "We are aware of the current situation. Myself and Mani,
VU2WMY tried listening to the beacon and work thru the satellite during
the 04:05 UTC pass over India but nothing was heard."

Nitin will post further updates when more news is available from ISRO.
Amateur satellite operators are encouraged to post VO-52 status on
http://oscar.dcarr.org/ Status Page.

[ANS thanks AMSAT INDIA Secretary Nitin, VU3TYG for the above
information]

Satellite Special Events Announced

TP8 - France March 9-11

The Council of Europe Radio Amateur Club (CERAC - TP2CE) will be active
as TP8CE between March 9-11 to celebrate the 40th anniversary of the
European Youth Center. Operations planned on all HF bands and modes, and
possibly the satellites. QSL via F5LGF. An online log search will be
available at: http://ewwa.free.fr

6H - Mexico April 13-18

Members of the Grupo DXXE will activate the special event callsign
6H6IARU between April 13-18 to celebrate the 87th anniversary of the
founding of the International Amateur Radio Union (IARU), and to
celebrate "World Amateur Radio Day" on April 18th.

This year's theme for the "World Amateur Radio Day" is Amateur Radio
Satellites: "Celebrating 50 Years in Space" in remembrance the launch of

OSCAR 1 on December 12, 1961, and the launch of OSCAR 2 on June 2, 1962.

Operations will be on all bands between 160-6 meters, as well as the amateur radio satellites from different Grid Locators throughout Mexico. QSOs with this station are valid for the IARU Region 2 award, the various FMRE awards and the DXXE award <www.dxxe.org>. QSL via N7RO or LoTW.

[ANS thanks Ohio/Penn DX Bulletin No. 1051 for the above information]

Coverage of Next Cubesats on AMSAT-UK Web

AMSAT-UK has compiled a series of very informative web page reports about upcoming Cubesat launches. Read up on the next flock of birds slated for launch. Follow the links to photos, satellite videos, and additional technical data on the AMSAT-UK web.

Antares Launch Slip Delays Dove-1 Satellite
http://www.uk.amsat.org/5061

The 3U amateur radio satellite Dove-1 (145.825 MHz AX.25 FM) was originally planned to launch on the Antares launcher on February 28 but reports indicate it may be Fall before it is launched.

Space.com reports that on February 21 Orbital Sciences Corporation announced a further slip and the launch of Antares could now be delayed until as late as September. Read the space.com report at:
http://tinyurl.com/Antares-Delay (space.com)

The new Dove-1 (DO-17 was the original Dove satellite) will transmit on 145.825 MHz 1200 bps AFSK AX.25 FM downlink with telemetry data, including temp/power supply/current/RSSI/solar vector/acceleration, approximately every 30 seconds. The beacon can transmit at up to 1 watt and will use a quarter wave monopole antenna cut from a tape measure.

It also has a 2.4 GHz half-duplex, spread spectrum radio with patch antenna that will be used for main payload downlink and telecommand uplink. The data rate will be 115 kbps.

The planned orbit is 280 by 270 km at 51.6 deg inclination which will give Dove-1 a lifetime of about 2 weeks before re-entry.

Vietnam Student CubeSat F-1
http://www.uk.amsat.org/5025

Vietnamese students have produced a video about their amateur radio CubeSat F-1, callsign XV1VN. The F-1 is an educational CubeSat to be launched in the summer of 2012. It will carry a low resolution C328 camera with 640 480 resolution and two Yaesu VX-3R transceivers using

145.980 and 437.485 MHz.

oVX-3R1
-Frequency: 437.485MHz, FM Narrow
-Power supply: directly from solar cells, only operates in sunlight
-Output power: max 0.3W, half-wave dipole antenna -Modulation scheme:
Morse code beacon (10 chars) using PWM CW -Beacon interval: every 30
seconds (configurable)

oVX-3R2
-Frequency: 145.980MHz , FM Narrow
-Power supply: rechargeable battery, operates in the dark by default
but can be commanded to operate in sunlight as well -Output power: max
1.0W, half-wave dipole antenna -Modulation scheme: AFSK 1200bps, half
duplex -Telemetry interval: one AX.25 packet every 30 seconds

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TechEdSat to use 'SatPhone'
http://www.uk.amsat.org/5018

TechEdSat will be deployed from the International Space Station (ISS).
It is a 1U CubeSat that will demonstrate Plug and Play power
architecture and two way communication via the satellite phone/data
networks Iridium and Orbcomm.

There will be a 437MHz beacon transmitting 1 watt to 1/4 wave mono-
pole. Commanding is via the commercial networks and there is a 2 week
watchdog timer to stop the beacon in the event of no commands being
received.

TechEdSat will be launched along with Raiko, FITSat-1, We-Wish and
F-1 to the ISS aboard HTV-3, currently planned to launch July 18, 2012.
>From there, it will be deployed into Low Earth Orbit using the JAXA
J-SSOD deployer, from the Japanese Experiment Module (JEM also known as
Kibo).

Wiki - TechEdSat http://en.wikipedia.org/wiki/TechEdSat
Kibo Robot Arm http://kibo.jaxa.jp/en/about/kibo/rms/

FITSAT-1 CubeSat to use 5.8 GHz and Optical Comms
http://www.uk.amsat.org/2037

The Amateur Radio CubeSat FITSAT-1 plans to transmit 115.2 kbps digital
data in the Amateur Satellite Service 5.8 GHz band and will also carry
an Optical Communications experiment.

FITSAT-1 (aka NIWAKA) is a 1U CubeSat (10*10*10cm) that should be be
deployed from the International Space Station by robot arm in late 2012.
It will generate about 2W RF output using a 16W DC input.

The main mission will be to demonstrate high speed data transfer from a satellite, it can transmit a VGA-size (640 480 pixel) JPEG photograph in only 5 to 6 seconds.

The second mission is to determine if a satellite can be made to appear as an "artificial star" using high-output LEDs in flash mode. The light from this flash will be received by the ground station, which has a telescope with photo-multiplier linked to a 5.8GHz parabola antenna. This is a basic experiment to investigate the possibility of optical communication with satellites.

A UHF AX25 1k2baud transceiver will be carried for telemetry and telecommand purposes and a UHF CW beacon will also be provided. It will be deployed along with the satellites RAIKO and WEWISH into a 350x350km 51.6deg inclination orbit.

The following downlink frequencies have been coordinated by the IARU Satellite Frequency Coordination Panel: CW 437.250 MHz, FM 437.445 MHz, High speed data 5840.00 MHz.

Euroluna OZ9LUNA CubeSat Launch Update
http://www.uk.amsat.org/5153

Euroluna are a Danish amateur team participating in the $30 million Google Lunar X PRIZE contest to be the first privately funded team to land and drive a rover on the Moon. The President of Euroluna, Palle Haastrup OZ1HIA gives an update on the Romit1 CubeSat and plans for Romit2 and Romit3.

Romit1 is a 2U CubeSat that is planned to launch on the Interorbital Systems Neptune 9 rocket. After deployment Romit-1 will stabilize itself prior starting its engine to power itself into a higher orbit.
If everything goes well it should, after a year, be out in a 700 km orbit, having started in a 310 km orbit.

It is hoped that radio amateurs across the world will assist the team in retrieving the data sent down, for example, they can gather images from the six cameras. The downlink frequency is 437.505 MHz at 1200bps.

The group are currently looking for a launch opportunity for Romit2 as well as Romit3 that is planned to reach the Moon.

[ANS thanks AMSAT-UK for the above information]

April 18 World Amateur Radio Day 2012 - 50 Years in Space

Every year on April 18 the IARU celebrates World Amateur Radio Day to note its anniversary starting in 1925.

This year's theme for the World Amateur Radio Day 2012 is Amateur Radio Satellites: "Celebrating 50 Years in Space" in remembrance the launch of OSCAR 1 on December 12, 1961, and the launch of OSCAR 2 on June 2, 1962.

The AMSAT News Service would like to publicize the events your group is planning for April 18, 2012. Just send the information to JoAnne, K9JKM (k9jkm@amsat.org) and we'll get the news out.

[ANS thanks the IARU for the above information]

Amateur Radio on the International Space Station (ARISS) Status Report
February 27, 2012

1. Upcoming School Contacts

An Amateur Radio on the International Space Station (ARISS) contact was successful for Parkside Elementary School in Atlanta, Georgia on Friday, March 2 at 16:42 UTC via station K6DUE in Greenbelt, Maryland. The ARISS contact is part of a comprehensive education plan which will pique students' interest in Science, Technology, Engineering and Math (STEM). An article about this contact appears on the NASA Talk Web site where ideas are shared about the contact and lesson plans. Contact audio may be available on NASA-TV.
http://nasatalk.com/component/resource/article/bylines/164-nasa-and-stem-resources-for-k-4/1722-parkside-elementary-school-to-connect-to-iss.html

The 5th Geniko Lykeio Katerinis in Katerini, Greece has been completed for their Amateur Radio on the International Space Station (ARISS) contact on Friday, March 2 at 17:03 UTC. This activity has been integrated into the school curriculum covering astronomy and ham radio issues. Special attention has been given to the ISS regarding its role in humanity and science, its orbit, and the everyday life of the astronaut. ISS courses were based on ESA's education tool, "ISS Education Kit."

2. ARISS Contact Featured at John Glenn Event

On Monday, February 20, an ARISS contact was held during the John Glenn Event at the State Records Office of Western Australia in Perth, via telebridge station AH6NM in Hawaii. The contact was held in celebration of the 50th anniversary of John Glenn's orbit of the Earth, when the population of Perth turned on its lights and Glenn observed the city was visible from space, leading to Perth's nickname, "City of Lights." The event opened with a pre-recorded video address given by Senator Glenn. Speeches from Australia's leading scientists were also given, followed by the ARISS contact with Dan Burbank, KC5ZSX on the ISS. The event was streamed live on the internet and was covered by television stations and ABC (Australian Broadcasting Corporation) Radio.

3. Italian Students Experience ARISS Contact

An Amateur Radio on the International Space Station (ARISS) contact was held between 1 Circolo Didattico Nicola Fornelli located in Bitonto, Italy and on-orbit astronaut Don Pettit, KD5MDT on Friday, February 24. The students had all their questions addressed concerning what it takes to become an astronaut and what it is like to live on the ISS. The contact highlighted their studies covering life in space, communications, space conquests and research, artificial satellites and the ISS. Approximately 300 people turned out for the event, including Italian Air Force officers and media representatives.

4. ARISS International Team Teleconference Held

The monthly ARISS International Team teleconference was held on Tuesday, February 21. Topics of discussion included a World Radiocommunication Conference 2012 (WRC-12) abstract concerning Nano and Pico satellites, the status of Ham TV and an update on the replacement VHF Ericsson. Minutes have been posted: http://ariss.rac.ca/arisstel2012-02-21.htm

5. Astronaut Training Status

Astronaut Alexander Gerst, who passed his amateur radio license exam on February 13, has been given the callsign KF5ONO. He is scheduled to fly with Expedition 40 in May 2014.

An introductory session is planned for Gregory Wiseman, KF5LKT (Expedition 40, May 2014) on Monday, February 27 and a preflight session is scheduled for Expedition 32 astronauts Sunita Williams, KD5PLB and Akihiko Hoshide, KE5DNI on Monday, March 5. Williams and Hoshide will fly later this year.

[ANS thanks Carol, KB3LKI, for the above information]

/EX

In addition to regular membership, AMSAT offers membership in the President's Club. Members of the President's Club, as sustaining donors to AMSAT Project Funds, will be eligible to receive additional benefits. Application forms are available from the AMSAT Office.

73,
This week's ANS Editor,
Dee Interdonato, NB2F
nb2f at AMSAT dot org

43. Radio Meteor Obs. Bull. February 2012

Newsgroup: rec.radio.amateur.space
Date: 2012-03-05 18:32:04 UTC
From: Chris Steyaert <observations@rmob.org>
Message-ID: <rj1al7lo8jtbjj4tepscmm4815itiv95n8@4ax.com>
Source record: 193
Cross-posted to: rec.radio.amateur.space,sci.astro.amateur

Radio Meteor Observation Bulletin No. 223 of February 2012 (94 K) is available now as

http://www.rmob.org/rmobtext/rmob1202.txt

More information and the visual presentation of the hourly forward scatter counts can be found on

http://www.rmob.org

Chris

44. Weekly Highlights of Solar and Geomagnetic Activity, 27 February - 04 March 2012

Newsgroup: rec.radio.amateur.space
Date: 2012-03-06 16:30:07 UTC
From: SWPC.Webmaster@noaa.gov
Message-ID: <20120306163001.D99C533C6F@panix2.panix.com>
Source record: 194
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.dx,rec.radio.amateur.space,rec.radio.shortwave,rec.radio.info

```
:Product: Weekly Highlights and Forecasts
:Issued: 2012 Mar 06 1552 UTC
# Prepared by the US Dept. of Commerce, NOAA, Space Weather Prediction Center
# Product description and SWPC contact on the Web
# http://www.swpc.noaa.gov/weekly.html
#
# Weekly Highlights and Forecasts
#
Highlights of Solar and Geomagnetic Activity
27 February - 04 March 2012

Solar activity ranged from very low to moderate levels. Activity was
at very low to low levels during 27 February - 01 March with
occasional B-class and isolated C-class flares. Activity increased
to moderate levels on 02 March due to an M3/Sf flare at 02/1746 UTC
from Region 1429 (N18, L=300, class/area Dkc/700 on 04 March).
Activity decreased to low levels on 03 March with occasional
low-level C-class flares from Region 1429. Activity returned to
moderate levels on 04 March due to a long duration M2/1n flare at
04/1052 UTC from Region 1429. Region 1429 rotated into view on 03
March and quickly became recognized as a large, magnetically complex
spot group with a reverse-polarity, beta-gamma-delta magnetic
configuration.

No proton events were observed at geosynchronous orbit, however, the
greater than 10 MeV proton flux was enhanced due to the long
duration M2 flare observed on 04 March.

The greater than 2 MeV electron flux at geosynchronous orbit was at
normal to moderate levels during 27 February - 01 March. Flux levels
increased to normal to high levels during 02 - 04 March.

Geomagnetic field activity was at quiet to minor storm levels during
27 - 28 February due to a CME passage associated with the filament
eruption/asymmetric halo-CME observed on 24 February. Activity
decreased to quiet levels on 29 February. Quiet to unsettled levels
occurred during 01 - 04 March with active to minor storm periods
observed at high latitudes due to weakly-enhanced solar wind speeds
combined with sustained periods of weak southward IMF (Negative Bz).

Forecast of Solar and Geomagnetic Activity
07 March - 02 April 2012
```

Solar activity is expected to be at moderate to high levels from 07 - 16 March. Activity is expected to decrease to low levels during 17 - 28 March after Region 1429 rotates around the west limb. Probabilities for moderate to high activity will increase once again on 29 March with the return of Region 1429.

There is a chance for isolated proton events at geosynchronous orbit while Region 1429 remains on the disk through 16 March.

The greater than 2 MeV electron flux at geosynchronous orbit is expected to be at normal to moderate levels from 07 - 17 March. Flux is expected to increase to moderate to high levels on 18 - 19 March due to effects from a recurrent coronal hole high speed stream (CH HSS). Normal to moderate levels are expected to return from 20 - 28 March followed by moderate to high levels on 30 March - 01 April due to a second recurrent CH HSS. Normal to moderate levels are expected for the remainder of the period.

Geomagnetic field activity is expected to be active with a chance for minor storm levels on 07 March due to the combined arrival of CMEs observed on 04 and 05 March. Activity is expected to be at quiet to unsettled levels on 08 March as the effects from those CMEs subside. Mostly quiet conditions are expected during 09 - 10 March. Quiet to unsettled levels are expected on 11 - 13 March due to weak CH HSS effects. Activity is expected to decrease to quiet levels during 14 - 16 March. Activity is expected to increase to unsettled to active levels during 17 - 20 March due to a recurrent negative polarity CH HSS. Mostly quiet conditions are expected from 21 - 27 March followed by an increase to quiet to unsettled levels on 28 - 31 March due to another recurrent CH HSS. Predominantly quiet conditions are expected for the remainder of the period.

Attention Beginning Monday March 12, 2012, the Weekly Bulletin will now be issued and available on the SWPC web page every Monday morning by 1500 UTC.

45. WSR-069 AMSAT Weekly Satellite Report

Newsgroup: rec.radio.amateur.space
Date: 2012-03-09 15:47:16 UTC
From: JoAnne Maenpaa <k9jkm@comcast.net>
Message-ID: <001401ccfe0b$dee9c760$9cbd5620$@net>
Source record: 195
Cross-posted to: rec.radio.amateur.space,rec.radio.info

This report is organized into three (3) parts.
Part 1 (S1) - operational analog amateur satellites
Part 2 (S2) - operational digital amateur satellites
Part 3 (S3) - non - operational satellites

SB SAT @ AMSAT W8ISS $WSR-069.S1
WSR 069 Part 1 03/09/2012

AMSAT NEWS SERVICE BULLETIN 069.S1
FROM AMSAT HQ SILVER SPRING, MD, March 09, 2012
TO ALL RADIO AMATEURS
BID: $WSR-069.S1

DO-64 Delfi-C3
Catalog number: 32789
Launch Date: April 28, 2008 0354z
Launch site: Satish Dhawan Space Centre, India

Status: Operational
Current Mode: Science Mode - Beacon ONLY

Telemetry: 145.870 MHz

Downlink: 145.880 to 145.920 MHz
Uplink: 435.530 to 435.570 MHz

Delfi-C3 web page: http://www.delfic3.nl/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnumh
[02092011]
��VO-52 HAMSAT
Catalog number: 28650
Launch Date: May 05, 2005 0444z
Launch site: Satish Dhawan Space Centre, India

Status: Operational
Current Mode: U/v - Indian Transponder

Frequencies:
Indian Transponder:
Uplink: 435.220 to 435.280 MHz LSB/CW
Downlink: 145.930 to 145.870 MHz USB/CW

Dutch Transponder:
Uplink: 435.225 to 435.275 MHz LSB/CW
Downlink: 145.925 to 145.875 MHz USB/CW

Indian Beacon: 145.9360 MHZ CW
Dutch Beacon: 145.860 MHz 12WPM with CW message

Mode and Antenna Polarization:
V: LHCP
U: RHCP

Official Webpage: http://www.amsatindia.org/hamsat.htm

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum0

To know what transponder is switched on please listen for the beacon
that is active. Each transponder has a different beacon.
[02092011]
��SO-50 SAUDISAT-1C
Catalog number: 27607
Launch date: December 20, 2002 1700z
Launch site: Baikonur, Kazakhstan

Status: Operational

Current Mode: V/u

Uplink: 145.850 MHz FM - 67.0 Hz PL tone
Downlink: 436.795 MHz

Mode and Antenna Polarization:
V: Linear
U: Linear

Official Webpage: http://saudisat.kacst.edu.sa/index.shtml
(not up and running currently)

To switch the transmitter on, you need to send a CTCSS tone of 74.4
Hz. The order of operation is thus: (allow for Doppler as necessary):
1) Transmit on 145.850 MHz with a tone of 74.4 Hz to arm the 10 minute
timer on board the spacecraft.
2) Now transmit on 145.850 MHz (FM Voice) using 67.0 Hz to PT the re-
peater on and off within the 10 Minute window.
3) Sending the 74.4 tone again within the 10 minute window will reset
the 10 minute timer.
[02092011]
��FO-29 JAS-2
Catalog number: 24278
Launch Date: August 17, 1996

Status: Operational
Current Mode: V/u (Mode JA)

Voice/CW (Mode JA)
Uplink: 145.90 to 146.00 MHz CW/LSB
Downlink: 435.80 to 435.90 MHz CW/USB
Beacon: 435.795 MHz

Digital Mode JD
Uplinks: 145.850 MHz FM
145.870 MHz FM
145.910 MHz FM
Downlink: 435.910 MHz 1200-baud BPSK or 9600-baud FSK
Callsign: 8J1JCS
Digitalker: 435.910 MHz

Mode and Antenna Polarization:
V: RHCP
U: RHCP

For current operational schedule for FO-29:
http://www.ne.jp/asahi/m-arai/gkz/satinfo/fo29e.htm

JARL English webpage:
http://www.jarl.or.jp/English/5_Fuji/ejasmenu.htm

AMSAT-NA Webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID
�retURL�atellites/status.php

Mineo Wakita, JE9PEL, has created a simple decoder program for FO29's
CW telemetry downlink: http://www.ne.jp/asahi/hamradio/je9pel/
fo29cwts.htm
[01122012]
��AO-27 AMRAD
Catalog number: 22825
Launch date: September 26, 1993 0140z
Launch site: Kourou, French Guiana

Status: Operational

Current Mode: V/u

Uplink: 145.850 MHz FM
Downlink: 436.797 MHz FM

Mode and Antenna Polarization:
V: Linear
U: Linear

Official Webpage: http://www.ao27.org
[02092011]
��AO-7 AMSAT OSCAR 7
Catalog number: 07530
Launch Date: November 15, 1974
Launch site: Vandenberg AFB, California, USA

Status: Operational

Current Mode: Alternating between Mode A and B every 24 hours

Uplink: 145.850 to 145.950 MHz CW/USB Mode A
432.125 to 432.175 MHz CW/LSB Mode B

Downlink: 29.400 to 29.500 MHz CW/USB Mode A (1W PEP)
145.975 to 145.925 MHz CW/USB Mode B (8W PEP)
145.975 to 145.925 MHz CW/USB Mode C (2W PEP)
Beacons: 29.502 MHz CW
145.972 MHz CW
435.100 MHz CW
2304.100 MHz CW

Official Webpage:
http://www.amsat.org/amsat-new/satellites/sat_summary/ao7.php

The AO-7 Logbook and Resource Website:
http://www.planetemily.com/ao7/
[02092011]
��INTERNATIONAL SPACE STATION (ISS) - ARISS
Catalog number: 25544
Launch date: November 20, 1998 0640z (ZARYA module)
Launch sites: Baikonur, Kazakhstan
Kourou, French Guiana
Uchinoura Space Center, Japan
Kennedy Space Center, Titusville, Florida, USA

Status: Operational

Current Active Modes: FM Repeater - OFF
Voice - V/v
BBS - OFF
2m APRS - ON
70cm Digi - ON
SSTV - OFF

Expedition 30 Crew (November 2011 - March 2012):
Commander: Dan Burbank KC5ZSX
Flight Engineer: Anton Shkaplerov
Flight Engineer: Anatoly Ivanishin
Flight Engineer: Oleg Kononenko RN3DX
Flight Engineer: Andr� Kuipers PI9ISS
Flight Engineer: Don Pettit KD5MDT

Available Modes and Frequencies:
Digital/APRS:
Worldwide 2m packet uplink: 145.825 MHz FM 1k2
Worldwide 2m packet downlink: 145.825 Mhz FM 1k2
Worldwide 70cm packet downlink: 437.550 Mhz FM 1k2
Worldwide 70cm packet downlink: 437.550 Mhz FM 1k2

Voice:
Region 1 voice uplink: 145.200 MHz FM
Region 2/3 voice uplink: 144.490 MHz FM
Worldwide downlink: 145.800 MHz FM

Crossband Repeater:
Repeater Uplinks: 1269.650 MHz FM
437.800 MHz FM
145.990 MHz FM - 67.0 PL (Kenwood)
Repeater Downlink: 145.800 MHz FM
437.800 MHz FM (Kenwood)

SSTV Robot 36:
Downlink: 145.800 MHz FM

Mode and Antenna Polarization:
V: Linear
U: Linear

Callsigns:
Belgian: OR4ISS
German: DP0ISS
Russian: RS0ISS
RZ3DZR
United States: NA1SS
2m Packet Mailbox: RS0ISS-11
2m Digipeater alias: ARISS
70cm Packet Mailbox: RS0ISS-1
70cm Digipeater callsign: RS0ISS
70cm Digipeater alias: ARISS

Official ARISS Webpage: http://www.rac.ca/ariss
ISS Fan Club Webpage: http://www.issfanclub.com
APRS tracking page: http://www.ariss.net/

ISS Daily Crew Schedule: http://spaceflight.nasa.gov/station/timelines
Remember that the crew operates on UTC time. Also, all of the time
line is NOT translated from Russian and posted.
[12262011]
NNNN
/EX

SB SAT @ AMSAT W8ISS $WSR-069.S2
WSR 069 Part 2 03/09/2012

AMSAT NEWS SERVICE BULLETIN 069.S2
FROM AMSAT HQ SILVER SPRING, MD, March 09, 2012
TO ALL RADIO AMATEURS
BID: $WSR-069.S2

XaTcobeo
Catalog Number: 38082
Launch Date: Febrauary 13, 2012
Launch Site: Kourou, French Guiana

Status: On Orbit

Uplink:
Downlink: 437.365 MHz FFSK with AX.25

Beacon:

Callsign:

URL:

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum5
[03012012]
��UniCubeSat
Catalog Number:
Launch Date: Febrauary 13, 2012
Launch Site: Kourou, French Guiana

Status: On Orbit

Uplink:
Downlink: 437.305 MHz 9k6 bps FSK

Beacon:

Callsign:

URL:

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum3
[02142012]
��Robusta
Catalog Number:
Launch Date: Febrauary 13, 2012
Launch Site: Kourou, French Guiana

Status: On Orbit

Uplink:
Downlink: 437.325 MHz 1k2 FM telemetry (data every 1 min, 20 sec. burst)

Beacon:

Callsign:

URL:

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum2
[02142012]
��PW-Sat
Catalog Number:
Launch Date: Febrauary 13, 2012
Launch Site: Kourou, French Guiana

Status: On Orbit

Uplink: 435.020 MHz FM
Downlink: 145.900 MHz DSB

Beacon:

Callsign:

URL:

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum2
[02142012]
��MO-72 MaSat-1
Catalog Number: 38079
Launch Date: Febrauary 13, 2012
Launch Site: Kourou, French Guiana

Status: On Orbit

Uplink:
Downlink: 437.345 MHz GFSK 625/1250 bps
437.345 MHz CW

Beacon:

Callsign:

URL:

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum6
[03012012]
��Goliat
Catalog Number: 38085
Launch Date: Febrauary 13, 2012
Launch Site: Kourou, French Guiana

Status: On Orbit

Uplink:
Downlink: 437.485 MHz 1k2 AFSK

Beacon:

Callsign:

URL:

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum�
[03012012]
��E-St@r
Catalog Number:
Launch Date: Febrauary 13, 2012
Launch Site: Kourou, French Guiana

Status: On Orbit

Uplink:
Downlink: 437.445 MHz 1k2 bps AFSK

Beacon:

Callsign:

URL:

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum0
[02142012]
��ALMASat1
Catalog Number: 38078
Launch Date: Febrauary 13, 2012
Launch Site: Kourou, French Guiana

Status: On Orbit

Uplink:
Downlink: 437.465 MHz 1k2 bps FSK
2407.850 MHz

Beacon:

Callsign:

URL:

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum9
[02212012]
��RS-39 Chibis-M
Catalog Number: 37841
Launch Date: October 30, 2011 10:11:00 UTC
Launch site: Tyuratam (Baikonur Cosmodrome), Kazakhstan

Status: Operational

Uplink:
Downlink:

Beacon: 435.315 MHz CW
435.215 MHz CW

Callsign:

URL:

IARU coordination status page:
[01122012]
��JUNGU
Catalog Number: 37841
Launch Date: October 12, 2011 05:30:00 UTC
Launch site: Satish Dhawan Space Centre, India

Status: On Orbit

Uplink: 145.??? MHz 1k2 (mode?)
Downlink: 437.505 MHz 9k6 (mode?)

Beacon: 437.275 MHz 15 wpm (?) CW

Callsign:

URL: http://www.iitk.ac.in/me/jugnu/index.htm

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum0
[01122012]
��SRMSAT
Catalog Number: 37839
Launch Date: October 12, 2011 05:30:00 UTC
Launch site: Satish Dhawan Space Centre, India

Status: On Orbit

Uplink: 145.900 MHz 1k AX.25 (speed?)
Downlink: 437.500 MHz 2k4 AX.25

Beacon: 437.425 MHz 12 wpm CW

Callsign:

URL: http://srmsat.in/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum1
[01122012]
��HRBE (E1P Explorer 1 [Prime] CubeSat (E1P-U2))
Catalog Number: 37855
Launch Date: October 28, 2011
Launch site: Vandenberg Air Force Base, California, USA

Status: On Orbit

Uplink: 437.305 MHz (???)
Downlink: 437.505 MHz AX.25 (SSB?)

Beacon:

Callsign:

URL: http://ssel.montana.edu/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum6
[01122012]
��M-Cubed
Catalog Number: 37855
Launch Date: October 28, 2011
Launch site: Vandenberg Air Force Base, California, USA

Status: On Orbit

Uplink:
Downlink: 437.485 MHz AX.25

Beacon:

Callsign:

URL: http://umcubed.org/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum!5
[01122012]
��RAX-2
Catalog Number: 37853
Launch Date: October 28, 2011
Launch site: Vandenberg Air Force Base, California, USA

Status: On Orbit

Uplink:
Downlink: 437.345MHz 9k6 GMSK

Beacon:

Callsign:

URL: http://rax.engin.umich.edu//

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum"1
[12262011]
��AO-71 AubieSat-1
Catalog Number: 37854
Launch Date: October 28, 2011
Launch site: Vandenberg Air Force Base, California, USA

Status: On Orbit

Uplink:
Downlink: 437.475 MHz 1k2 AX.25

Beacon: 437.475 MHz CW

Callsign: KI4NQO

URL: http://www.space.auburn.edu/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum8
[12262011]
��O/OREOS
Catalog Number: 37224
Launch Date: November 20, 2010
Launch site: Kodiak Launch Complex, Alaska, USA

Status: On Orbit

Uplink:
Downlink: 437.035 MHZ AX.25

Beacon:

Callsign:

URL: http://www.ooreos.org/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum6
[02092011]
��Rax-1 Radio Aurora Explorer
Catalog Number: 37223
Launch Date: November 20, 2010
Launch site: Kodiak Launch Complex, Alaska, USA

Status: On Orbit

Uplink:
Downlink: 437.505 MHz 9k6 GMSK

Beacon:

Callsign: RAX-1

URL: http://rax.engin.umich.edu/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum5
[02092011]
��FO-69 Fastrac-1 Sara Lily
Catalog Number: 37227
Launch Date: November 20, 2010
Launch site: Kodiak Launch Complex, Alaska, USA

Status: Operational

Uplink 1: 145.980 MHz 1k2 baud
Uplink 2: 145.825 MHz 1k2 baud
Downlink: 437.345 MHz 1k2 and 9k6 baud

Beacon: 437.435 MHz 1k2 AX.25

Callsign: Fast1

URL: http://fastrac.ae.utexas.edu/index.php

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum�
[07052011]
��FO-70 Fastrac-2 Emma
Catalog Number: 37380
Launch Date: November 20, 2010

Launch site: Kodiak Launch Complex, Alaska, USA

Status: Operational

Uplink 1: 435.025 MHz 1k2 baud
Uplink 2: 437.435 MHz 9k6 baud
Downlink: 145.825 MHz 1k2 and 9k6 baud

Beacon: 145.825 MHz 1k2 AX.25

Callsign: Fast2

URL: http://fastrac.ae.utexas.edu/index.php

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=
[12162011]
==StudSat
Catalog Number: 36796
Launch Date: July 12, 2010 0352z
Launch site: Satish Dhawan Space Centre, India

Status: On Orbit

Uplink: 437.505MHz, 9600bps FSK
Downlink: 437.505MHz, 9600bps FSK
Beacon : 437.505MHz, 20bps ASK

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum4
[02092011]
==TIsat-1
Catalog Number: 36799
Launch Date: July 12, 2010 0352z
Launch site: Satish Dhawan Space Centre, India

Status: On orbit

Callsign: HB9DE

Uplink: 145.980MHz FM, AFSK
Downlink: 437.305MHz FM, AFSK
Beacon: 437.305MHz CW

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum8
[02092011]
==SwissCube
Catalog Number: 35932
Launch Date: September 23, 2009 0621z
Launch site: Satish Dhawan Space Centre, India

Status: Operational

Callsign: HB9EG

Beacon(100mw): 437.5050MHz CW
Beacon(1w): 437.5050MHz FSK 1k2bps

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum9
[02092011]
��UWE-2
Catalog Number: 35934
Launch Date: September 23, 2009 0621z
Launch site: Satish Dhawan Space Centre, India

Status: In Orbit

Beacon(500mw): 437.3850 MHz AFSK 1k2bps
437.3850 MHz FSK 9k6bps

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum0
[02092011]
��ITUpsAT1
Catalog Number: 35935
Launch Date: September 23, 2009 0621z
Launch site: Satish Dhawan Space Centre, India

Status: Operational

Beacon(100mw): 437.325MHz CW
Beacon(1w): 437.325MHz 19k2bps

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum3
[02092011]
��BEESAT
Catalog Number: 35933
Launch Date: September 23, 2009 0621z
Launch site: Satish Dhawan Space Centre, India

Status: Operational

Callsign: DP0BEE

Beacon(100mw): 436.000MHz CW
Beacon(500mw): 436.000MHz GMSK 4k8bps
Beacon(500mw): 436.000MHz GMSK 9k6bp
[02092011]
��CP-6
Catalog Number: 35004
Launch Date: May 19, 2009 2355z
Launch site: Wallops Island, Virginia, USA

Status: Operational

Downlink: 437.365 MHz 1k2 AFSK

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum1
[01122012]
��HAWKSAT 1
Catalog number: 35003
Launch Date: May 19, 2009 2355z
Launch site: Wallops Island, Virginia, USA

Status: operational

Downlink: 437.345 MHz ?

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum5
[01122012]
��Pharmasat
Catalog Number: 35002
Launch Date: May 19, 2009 2355z
Launch site: Wallops Island, Virginia, USA

Status: Operational

Downlink: 437.465 MHz 1k2 AFSK

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum�
[02092011]
��ANUSAT
Catalog Number: 34808
Launch Date: April 20, 2009 0115z
Launch Site: Satish Dhawan Space Centre, India

Status: ?

Downlink: 435.000 MHz
Uplink: 145.800 MHz

Telemetry: 137.400 MHz
[02092011]
��SOHLA-1 (ASTRO TECH.)
Catalog Number: 33496
Launch Date: January 23, 2009 0354z
Launch site: Tanegashima Space Center, Japan

Status: Operational

Proposed Frequencies and Modes:
Downlink: 437.505 MHz AFSK/CW
Beacon: 437.505 MHz AFSK/CW

Callsign:

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum1
[02092011]

��KAGAYAKI (Solan Co.)
Catalog Number: 33495
Launch Date: January 23, 2009 0354z
Launch site: Tanegashima Space Center, Japan

Status: In Orbit

Downlink: 437.375 MHZ FSK9k6/CW
Beacon: 437.375 MHz FSK9k6/CW

IARU coordination status page:

AMSAT-NA webpage:

[02092011]
��STARS (Kagawa Univ.) (Twin Satellites)
Catalog Number: 33498
Launch Date: January 23, 2009 0354z
Launch site: Tanegashima Space Center, Japan

Status: Operational ?

Downlinks: 437.485 MHz FM/CW
437.465 MHz FM/CW
Beacons: 437.305 MHz FM/CW
437.275 MHz FM/CW

Callsigns: JR5YBN
JR5YBO

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum�

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID1&retURL
�atellites/status.php
[02092011]
��KKS-1 (Tokyo MCIT)
Catalog Number: 33499
Launch Date: January 23, 2009 0354z
Launch site: Tanegashima Space Center, Japan

Status: Operational

Downlink: 437.455 MHz AFSK/CW
Beacon: 437.385 MHz AFSK/CW

Callsign: JQ1YYY

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum7

AMSAT-NA webapge:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID0&retURL

�atellites/status.php
[20092011]
��PRISM (Tokyo Univ.)
Catalog Number: 33493
Launch Date: January 23, 2009 0354z
Launch site: Tanegashima Space Center, Japan

Status: Operational ?

Downlink: 437.425 MHz AFSK/GMSK/CW
Beacon: 437.250 MHz AFSK/GMSK/CW

Callsign: JQ1YCX

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum�

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID9&retURL
�atellites/status.php
[02092011]
��RS-30 Radio Sputnik 30 (Yubileiny)
Catalog Number: 32953
Launch Date: May 23, 2008 1520z
Launch site: Plesetsk Missile and Space Complex, Russia

Status: Operational

Curent Modes: Telemetry
Audio
Images

Downlinks: 435.315 MHz
435.215 MHz

AMSAT-NA website:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID5&ret
URL�atellites/status.php

Official website:
http://www.npopm.com/?cid�oca&caidC
[02092011]
��CanX-2
Catalog number: 32790
Launch Date: April 28, 2008 0354z
Launch site: Satish Dhawan Space Centre, India

Status: Operational in range of ground station only

Downlink: 437.478 MHz GFSK

For the latest project status update please visit the Can X-2 web
page: http://www.utias-sfl.net/nanosatellites/CanX2/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnumF
[02092011]
��AAUSAT-II
Catalog number: 32788
Launch Date: April 28, 2008 0354z
Launch site: Satish Dhawan Space Centre, India

Status: Operational

Downlink: 437.425 MHz 1k2 baud packet

For the latest project status update please visit the AAUSAT-II web
page:
http://www.aausatii.aau.dk/homepage/index.php?language&page&me

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum`
[02092011]
��CO-65 CUTE-1.7+APD II
Catalog number: 32785
Launch Date: April 28, 2008 0354z
Launch site: Satish Dhawan Space Centre, India

Status: Operational ?

Downlink: 437.475 MHz 9k6 Packet
Uplink: 1267.600 Mhz

Telemetry Beacon:
Downlink: 437.2750 MHz CW

For the latest project status update please visit the Cute-1.7+APD II
web page: http://lss.mes.titech.ac.jp/ssp/cute1.7/index_e.html

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnumx

Command Station blog website:
http://lss.mes.titech.ac.jp/ssp/cute1.7/blog/

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID2&retURL
atellites/status.php
[07052011]
��Compass-1
Catalog number: 32787
Launch Date: April 28, 2008 0354z
Launch site: Satish Dhawan Space Centre, India

Status: Operational

Current Mode: dependant on last received command

Uplink: 145.980 MHz FM
Downlink: 437.275 Mhz CW
437.405 MHz Packet

For the latest project status update please visit the Compass 1 web
page: http://www.raumfahrt.fh-aachen.de/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnumR

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID4&retURL
�atellites/status.php
[06162011]
��CO-66 Seeds II
Catalog number:
Launch Date: April 28, 2008 0354z
Launch site: Satish Dhawan Space Centre, India

Status: Operational

Downlink: 437.485 MHz

Callsign: JQ1YGU

For the latest project status update please visit the Seeds 2 web
page: http://cubesat.aero.cst.nihon-u.ac.jp/english/seeds_2_e.html

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum6

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID3&retURL
�atellites/status.php
[02092011]
��CAPE-1
Catalog Number: 31130
Launch Date: April 17,2007 0702z
Launch site: Baikonur, Kazakhstan

Status: Intermittent

Current Mode: /u

TLM Downlink: 435.245 MHz 9600 bs FSK AX.25
CW Beacon: 435.245 MHz CW

Callsign: K5USL

TLM and CW interchange every 30 seconds.

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID�&retURL
/satellites/status.php

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnumr
[02092011]
��CP3
Catalog Number: 31129
Launch Date: April 17,2007 0702z
Launch site: Baikonur, Kazakhstan

Status: Operational

Current Mode: /u

Downlink: 436.845 MHz 1200 bps AFSK AX.25

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnumt
[02092011]
��CO-58 CubeSat XI-V
Catalog number: 28895
Launch Date: October 27, 2005 0652z
Launch site: Plesetsk Missile and Space Complex, Russia

Status: Operational - CW Beacon only

Current Mode: /u

Telemetry Downlink: 437.4250 MHz AFSK 1200bps using AFK protocol
Beacon: 437.2750 MHz CW

Callsign: JQ1YGW

Official Webpage: http://www.space.t.u-tokyo.ac.jp/cubesat/mission/V/

Pictures received by Mineo Wakita - JE9PEL:
http://www.ne.jp/asahi/hamradio/je9pel/xivpicte.htm

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum7
[02092011]
��CO-57 CubeSat XI-IV
Catalog number: 27848
Launch date: June 30, 2003 1415z
Launch site: Plesetsk Missile and Space Complex, Russia

Status: ?????

Current Mode: /u

Beacon: 436.8475 MHz CW
Telemetry : 437.4900 MHz AFSK 1200 BPS

Callsign: JQ1YGW

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID�&retURL
�atellites/status.php

Official Webpage: http://www.space.t.u-tokyo.ac.jp/cubesat/mission/V/
[02092011]
��QuakeSat
Catalog Number: 27845
Launch Date: June 30, 2003 1415z
Launch site: Plesetsk Missile and Space Complex, Russia

Status: Telemetry only

Current Mode: 9600 baud data packet

Mode U packet
Downlink: 436.675 MHz 9k6 BPS

Quakesat webpage:
http://www.quakefinder.com/services/quakesat-ssite/
[02252011]
��CO-55 Cute-1.7+APD II
Catalog Number: 27844
Launch date: June 30, 2003 1415z
Launch site: Plesetsk Missile and Space Complex, Russia

Status: Operational

Current Mode: CW downlink worldwide
AX25 Packet with uplink command over Japan only

Mode U Telemetry
Downlink: 437.4000 MHz AFSK 1200 BPS

Mode U TLM Beacon
Downlink: 436.8375 MHz CW

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satIDi&retURL
�atellites/status.php

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnumx
[02092011]
��NO-44 PCSAT
Catalog number: 26931
Launch Date: September 30, 2001 0240z
Launch site: Kodiak Launch Complex, Alaska, USA

Status: Telemetry only

Current Mode: V/v

General Usage Uplink/Downlink: 145.827 MHz 1200 Baud
Special Usage Downlink: 144.390 Mhz 1200 Baud

PCSAT APRS page: http://pcsat.aprs.org

aprstlm Telemetry Decoder program:
http://www.xciv.org/~iain/aprstlm/v1.2/
[02092011]
��RS-22 RADIO SPORT 22 (MOZHAYETS 4)
Catalog number: 27939
Launch Date: September 27, 2003 0612z
Launch site: Plesetsk Missile and Space Complex, Russia

Status: Operational - 70cm cw only

Current Mode: /u

CW Beacon - 435.352 MHz
145.818 MHz

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satIDv&retURL
�atellites/status.php
[02092011]
��LO-19 LUSAT
Catalog number: 20442
Launch date: January 22, 1990
Launch site: Kourou, French Guiana

Status: CW Beacon only

Uplinks: 145.840 MHz 1200-baud Manchester FSK
145.860 MHz 1200-baud Manchester FSK
145.880 MHz 1200-baud Manchester FSK
145.900 MHz 1200-baud Manchester FSK

CW downlink: 437.125 MHz

Digital downlink: 437.150 MHz SSB (RC-BPSK 1200-baud PSK)

Broadcast Callsign: LUSAT-11
BBS: LUSAT-12

General information and telemetry samples can be found at:
www.telecable.es/personales/ea1bcu
[02092011]
��UO-11 OSCAR-11
Catalog number: 14781
Launch Date: March 1, 1984
Launch site: Vandenburg AFB, California, USA

Status: Operational ?

Current Mode: /v

Telemetry Downlink: 145.825 MHz FM 1200 AFSK
UHFBeacon: 435.025 MHz
Mode-S Beacon: 2401.500 MHz

Mode and Antenna Polarization:
V: RHCP
S: LHCP

Webpage: http://www.users.zetnet.co.uk/clivew/
MPEG3 files: http://www.ne.jp/asahi/hamradio/je9pel/uo11tlme.htm
[07052011]
��INTERNATIONAL SPACE STATION (ISS) - ARISS
Catalog number: 25544
Launch date: November 20, 1998 0640z (ZARYA module)
Launch sites: Baikonur, Kazakhstan
Kourou, French Guiana
Uchinoura Space Center, Japan
Kennedy Space Center, Titusville, Florida, USA

Status: Operational

Current Active Modes: FM Repeater - OFF
Voice - V/v
BBS - OFF
2m APRS - ON
70cm Digi - ON
SSTV - OFF

Expedition 30 Crew (November 2011 - March 2012):
Commander: Dan Burbank KC5ZSX
Flight Engineer: Anton Shkaplerov
Flight Engineer: Anatoly Ivanishin
Flight Engineer: Oleg Kononenko RN3DX
Flight Engineer: Andr� Kuipers PI9ISS
Flight Engineer: Don Pettit KD5MDT

Available Modes and Frequencies:
Digital/APRS:
Worldwide 2m packet uplink: 145.825 MHz FM 1k2
Worldwide 2m packet downlink: 145.825 Mhz FM 1k2
Worldwide 70cm packet downlink: 437.550 Mhz FM 1k2
Worldwide 70cm packet downlink: 437.550 Mhz FM 1k2

Voice:
Region 1 voice uplink: 145.200 MHz FM
Region 2/3 voice uplink: 144.490 MHz FM
Worldwide downlink: 145.800 MHz FM

Crossband Repeater:
Repeater Uplinks: 1269.650 MHz FM
437.800 MHz FM
145.990 MHz FM - 67.0 PL (Kenwood)
Repeater Downlink: 145.800 MHz FM
437.800 MHz FM (Kenwood)

SSTV Robot 36:
Downlink: 145.800 MHz FM

Mode and Antenna Polarization:
V: Linear
U: Linear

Callsigns:
Belgian: OR4ISS
German: DP0ISS
Russian: RS0ISS
RZ3DZR
United States: NA1SS
2m Packet Mailbox: RS0ISS-11
2m Digipeater alias: ARISS
70cm Packet Mailbox: RS0ISS-1
70cm Digipeater callsign: RS0ISS
70cm Digipeater alias: ARISS

Official ARISS Webpage: http://www.rac.ca/ariss
ISS Fan Club Webpage: http://www.issfanclub.com
APRS tracking page: http://www.ariss.net/

ISS Daily Crew Schedule: http://spaceflight.nasa.gov/station/timelines
Remember that the crew operates on UTC time. Also, all of the time
line is NOT translated from Russian and posted.
[12262011]
NNNN
/EX

SB SAT @ AMSAT W8ISS $WSR-069.S3
WSR 069 Part 3 03/09/2012

AMSAT NEWS SERVICE BULLETIN 069.S3
FROM AMSAT HQ SILVER SPRING, MD, March 09, 2012
TO ALL RADIO AMATEURS
BID: $WSR-069.S3

THE FOLLOWING ARE IN ORBIT BUT ARE NON-OPERATIONAL AT THIS TIME:

NANOSAIL-D
Catalog Number: 37361(?)
Ejection Date: January 17, 2011

Status: On orbit

Downlink: 437.270 MHz AX.25

URL: http://nanosaild.engr.scu.edu/dashboard.htm

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum5
[01052012]
��HO-68 HOPE-1 (CAS-1)(XW-1)
Catalog Number: 36122
Launch Date: December 15, 2009 0231z
Launch site: Taiyuan Space Center, PRC

Status: Non - Operational

Callsign:
Broadcast: BJ1SA-11
BBS: BJ1SA-12

Uplinks: 145.8250 MHz FM, PL 67.0 Hz.
145.9250 - 145.9750 MHz SSB/CW
145.8250 MHz AFSK 1200 BPS
Downlinks: 435.6750 MHz FM
435.7650 - 435.7150 MHz SSB/CW
435.6750 MHz AFSK 1200 BPS

Beacon: 435.7900 MHz CW

Mode and Antenna Polarization:
V: LHCP 2.0dBi max
U: RHCP 3.0dBi max

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum8

For more information about XW-1 (CAS-1):
http://
[01122012]
��SO-67 SumbandilaSat
Catalog Number: 35870
Launch Date: September 17, 2009 1555z
Launch site: Baikonur, Kazakhstan

Status: Non - Operational

Callsign: ZS0SUM

Uplink: 145.875MHz FM tone 233.6 Hz
Downlink: 435.345MHz FM

Mode and Antenna Polarization:
V: Linear
U: Linear

For more information about SO-67:
http://www.amsatsa.org.za/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum�
[01272012]
��CP4
Catalog Number: 31132
Launch Date: April 17, 2007

Status: Non-Operational

Current Mode: /u

TLM Downlink: 437.325 MHz 1200 bps FSK AX.25
CW Beacon: 437.325 MHz CW

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnumy
[09062010]
��LIBERTAD-1
Catalog Number: 31128
Launch Date: April 17, 2007

Status: Non-Operational

Current Mode: V/u APRS Packet ax25

Callsign: 5K3L

Uplink: 145.825 MHz 1200 AFSK ax25 APRS
Downlink: 437.399 MHz 1200 AFSK ax25 APRS

Telemetry Beacon: 437.4050 MHz 1200 AFSK ax25

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnumv
[09062010]
��PO-63 PEHUENSAT-1
Catalog Number: 29712
Launch Date: January 10, 2007

Status: Non-Operational

Current Mode: V/v

Uplink/Downlink: 145.825 Mhz FM
Voice Recorder: 145.825 Mhz FM

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnumQ
[09062010]
��NCUBE-2
Catalog number: 28897
Launch Date: October 27, 2005

Status: Still attached to XO-53 (SSETI)?

Proposed Callsign: TBA
Proposed Transmit Frequency: 437.305
2407.250

Official Website: http://www.ncube.no

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum$
[09062010]
��XO-53 SSETI
Catalog number: 28894

Launch Date: October 27, 2005

Status: Non-operational

Voice Uplink: 437.250 MHz FM 67Hz CTCSS
Voice Downlink: 2401.835 MHz FM
Packet Up/Downlink: 437.250 MHz 9k6 packet
Packet Downlink 2401.835 MHz 38k4 packet

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnumT
[09062010]
��UWE-1
Catalog Number: 28892
Launch Date: October 27, 2005

Status: Non-Operational

Mode U Telemetry
Downlink: 437.5050 MHz 9600 AFSK

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnumS
[09062010]
��AO-51 ECHO
Catalog number: 28375
Launch date: June 29, 2004 0745z
Launch site: Baikonur, Kazakhstan

Status: Non - Operational

Current Mode(s):
Voice repeater: V/u
Uplink: 145.880 MHz FM
Downlink: 435.150 MHz FM

Telemetry: Recovery efforts
Downlink: 435.150MHz 9k6

Analog voice downlink: 435.300 MHz FM
435.150 MHz FM
2401.200 Mhz FM
Analog voice uplink: 145.860 MHZ FM
145.880 MHz USB
145.880 MHz FM
145.920 MHz FM
145.920 MHz FM - 67 Hz PL tone burst
1268.705 MHz FM
Digital Downlinks: 435.150 MHz FM 38k4 PBP, 1 watt output
435.150 MHz FM 9k6 Pacsat Broadcast Protocol
2401.200 MHz FM 38k4 bps, AX.25
Digital Uplink: 145.860 MHz FM 9k6 Pacsat Broadcast Protocol
1268.703 mhz FM 9k6 Pacsat Broadcast Protocol

Beacon: 435.150 MHz

Mode and Antenna Polarization:
T: Linear
V: Linear
U: TX A (usually digital)LHCP
TX B (usually analog) RHCP
L: Linear
S: Linear

Broadcast: PECHO-11
BBS: PECHO-12

Official Webpage: http://www.amsat.org/amsat-new/echo/CTNews.php

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum
[12062011]
��CANX-1
Catalog Number: 27847
Launch Date: June 30, 2003

Status: Non-Operational

Downlink: 437.8800 MHz AFSK 1k2bps
[06052009]
��DTUSAT
Catalog Number: 27842
Launch Date: June 30, 2003

Status: Non-Operational

Current Mode: 2k4 AFSK Packet last reported

Downlink: 437.475MHz

Officail webpage: http://dtusat1.dtusat.dtu.dk/

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID1&retURL
�tellites/all_oscars.php
[02212009]
��AO-49 AATiS OSCAR-49 (SAFIR-M)
Catalog number: 27605
Launch Date: December 20, 2002

Status: Non-operational.

Uplink: 435.275 MHz 1200-baud AFSK
Downlink: 145.825 MHz 9600-baud FSK
(optional voice message)

Broadcast callsign: DP0AIS

Official webpage: http://amend.gmxhome.de
[01222007]
��MO-46 TIUNGSAT-1
Catalog number: 26548
Launch date: September 26, 2000

Status: Telemetry only

Uplinks: 145.850 MHz
145.925 MHz 9600-baud FSK
Downlink: 437.325 MHz

Broadcast callsign: MYSAT3-11
BBS: MYSAT3-12

TiungSat-1 is Malaysia's first micro-satellite and in addition to
commercial land and weather imaging payloads offers FM and FSK
Amateur Radio communication.

TiungSat-1, named after the mynah bird of Malaysia, was developed as
a collaborative effort between the Malaysian government and Surrey
Satellite Technology Ltd.
[03302009]
��NO-45 SAPPHIRE
Catalog number: 26932
Launch Date: September 30, 2001

Status: Non-Operational

Downlink: 437.095 MHz 1200 baud AX-25 AFSK
Uplink: 145.945 MHz UI Digipeater
Digi Callsign: KE6QMD

Everyone is welcome to use the digipeating/APRS features of Sapphire,
as per the user service agreement located at the following URL:
http://web.usna.navy.mil/~bruninga/pcsat/contract.txt
[03132005]
��SO-42 SAUDISAT-1B
Catalog number: 26549
Launch date: September 26, 2000

Status: Non-Operational

Downlink: 437.075 MHz

Broadcast Callsign: SASAT2-11
BBS: SASAT2-12

Further information is available at:
http://www.amsat.org/amsat/sats/n7hpr/so42.html
[01222007]
��SO-41 SAUDISAT-1A
Catalog number: 26545
Launch Date: September 26, 2000

Status: Non-Operational

Uplink: 145.850 MHz
Downlink: 436.775 MHz

Broadcast Callsign: SASAT1-11
BBS: SASAT1-12

Further information is available at:
http://www.amsat.org/amsat/sats/n7hpr/so41.html
[01222007]
��AO-40 AMSAT OSCAR 40
Catalog number: 26609
Launch Date: November 16, 2000

Status: Non-Operational

Uplinks

V-band: 145.840 - 145.990 MHz CW/LSB
U-band: 435.550 - 435.800 MHz CW/LSB
L1-band: 1269.250 - 1269.500 MHz CW/LSB
L2-band: 1268.325 - 1268.575 MHz CW/LSB

Downlinks

S2-band: 2401.225 - 2401.475 MHz CW/USB
K-band: 24048.010 - 24048.060 MHz CW/USB
Beacon: 2401.323 MHz
24048.035 MHz

P3-D Telemetry Beacons (IHU)

BEACON General Beacon(GB) Middle Beacon(MB) Engineering Beacon(EB)
2 m none 145.898 MHz none
70cm 435.438 MHz 435.588 MHz 435.838 MHz
13cm(1) 2400.188 MHz 2400.338 MHz 2400.588 MHz
13cm(2) 2401.173 MHz 2401.323 MHz 2401.573 MHz
3cm 10450.975 MHz 10451.125 MHz 10451.375 MHz
1.5cm 24047.885 MHz 24048.035 MHz 24048.285 MHz
[07162007]
��OO-38 OPAL
Catalog Number: 26063
Launch Date: January 27, 2000

Status: Non-Operational

Mode U TLM Beacon
Downlink: 437.1000 MHz 9600 FSK
[08132007]
��UO-36 UoSAT-12
Catalog number: 25693
Launch date: April 21, 1999

Status: Unknown

Uplink: 145.960 MHz (9600-baud FSK)
Downlinks: 437.025 MHz
437.400 MHz

Broadcast Callsign: UO121-11
BBS: UO121-12

The VK5HI viewer shareware for UO-36 is available on the AMSAT-NA web
site at the following URL:
ftp://ftp.amsat.org/amsat/software/win32/display/ccddsp97-119.zip
[01222007]
��SO-35 SUNSAT
Catalog Number: 25636
Launch date:February 23, 1999

Status: Non-Operational

Downlink: Mode B Repeater: 436.291 MHz
Mode J Digipeater: 436.250 MHz

Uplinks: Mode B Repeater: 145.825 MHz
Mode J Digipeater: 145.825 MHz
145.900 MHz

For more information of SUNSAT vist the satellite web site:
http://esl.ee.sun.ac.za/projects/sunsat/
[01222007]
��PO-34 PANSAT
Catalog number: 25520
Launch date: October 30, 1998

Status: Telemetry downloads only

Uplink/downlink: 436.500 MHz

Official Webpage: http://www.sp.nps.navy.mil/pansat/
[05092004]
��SO-33 SEDSAT-1
Catalog number: 25509
Launch date: October 24, 1998

Status: Semi-operational

Downlink: 437.910 MHz FM (9600-baud FSK)

The satellite is not currently available for uplink transmissions and
the image and transponder recovery efforts have been unsuccessful.

For more information on SedSat-1 visit the satellite web site:
http://seds.uah.edu/projects/sedsat/sedsat.htm
[09042006]
��GO-32 Gurwin TechSat-1B
Catalog number: 25397

Launch Date: July 10, 1998

Status: Non-Operational

Current Modes:
Telemetry : /u

Downlink: 435.225 MHz FM (9600-baud FSK)
435.325 Mhz - Not Available - temperature problems
Uplinks: 145.850 FM
145.890 FM
145.930 FM
1269.700 FM
1269.800 FM
1269.900 FM

Broadcast Callsign: 4XTECH-11
BBS Callsign: 4XTECH-12

More information of GO-32 can be found at:
http://asri.technion.ac.il/techsat/

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID&retURL
�atellites/status.php
[07172010]
��TO-31 TMSAT-1
Catalog number: 25396
Launch Date: July 10, 1998

Status: Non-operational

Uplink: 145.925 MHz 9600 baud FSK
Downlink: 436.925 MHz 9600 baud FSK

Broadcast callsign: TMSAT1-11
BBS: TMSAT1-12
[05012006]
��MO-30 UNAMSAT-2
Catalog Number: 24305
Launch Date: September 5, 1996

Status: Non-operational

Downlink: 435.1380 MHz AFSK 1200 BPS
Downlink: 435.2060 MHz AFSK 1200 BPS
Uplink: 145.8150 MHz AFSK 1200 BPS
Uplink: 145.8350 MHz AFSK 1200 BPS
Uplink: 145.8550 MHz AFSK 1200 BPS
Uplink: 145.8750 MHz AFSK 1200 BPS
[06042009]
��PO-28 POSAT-1
Catalog number: 22829

Launch Date: September 25, 1993

Status: Non-operational

Downlink: 429.950
Uplink: Not until handover back to Amatuer usage

Broadcast callsign: POSAT1-11
BBS callsign: POSAT1-12

AMSAT Webpage: http://www.amsat.org/amsat/sats/n7hpr/po28.html
POSAT-1 webpage:
http://www.ee.surrey.ac.uk/SSC/CSER/UOSAT/missions/posat1.html
[01012009]
��IO-26 ITAMSAT
Catalog number: 22826
Launch Date: September 26, 1993

Status: PSK carrier only

Current Mode:

Uplinks: 145.875 MHz FM 1200-baud
145.900 MHz FM 1200-baud
145.925 MHz FM 1200-baud
145.950 MHz FM 1200-baud

Downlink: 435.808 MHz PSK

Broadcast Callsign: ITMSAT-11
BBS: ITMSAT-12

Official webpage: http://www.itamsat.org
AMSAT Webpage: http://www.amsat.org/amsat/sats/n7hpr/io26.html
[01212007]
��KO-25 KITSAT
Catalog number: 22828
Launch date: September 26, 1993

Status: Non-operational

Uplink: 145.980 MHz FM 9600-baud FSK
Downlink: 436.500 MHz FM

Broadcast Callsign: HL02-11
BBS: HL02-12
[05092004]
��AO-24 ARSENE
Catalog Number: 22654
Launch Date: May 13, 1993

Status: Non-operational

Uplink: 435.0625 MHz FM 1k2bps AFSK
435.1125 MHz FM 1k2bps AFSK
435.1375 MHz FM 1k2bps AFSK
Downlink: 145.9750 MHz FM 1k2bps AFSK
2446.5025 MHz FM 1k2bps AFSK

Beacon: 2446.4700 MHz CW

Broadcast callsign:
BBS:
[12162009]
��KO-23 KITSAT
Catalog number: 22077
Launch date: August 10, 1992

Status: Non-operational

Uplink: 145.900 MHz FM (9600-baud FSK)
Downlink: 435.170 MHz FM

Broadcast Callsign: HLO1-11
BBS: HLO1-12
[01222007]
��UO-22 UOSAT
Catalog number: 21575
Launch date: July 17, 1991

Status: Non-Operational

Uplink: 145.900 FM 9600-baud FSK
Downlink: 435.120 MHz FM

Broadcast Callsign: UOSAT5-11
BBS: UOSAT5-12
[01222007]
��AO-21 AMSAT-OSCAR 21
Catalog Number: 21087
Launch Date: January 29, 1991

Status: Non-Operational

Uplink: 435.041 MHz FM DSP
Downlink: 145.983 MHz FM DSP
[01222007]
��FO-20 JAS-1b
Catalog number: 20480
Launch Date: February 07, 1990

Status: Non-Operational

Beacons: 435.795 MHz CW
435.910 MHz AX25

Voice Transponder:
Uplink: 145.900 to 146.000 MHz CW/LSB

Downlink: 435.800 to 435.900 MHz CW/USB

Digital Transponder:
Uplinks: 145.850 MHz
145.870 MHz
145.890 MHz
145.910 MHz
Downlink: 435.910 MHz

More FO-20 info can be found at:
http://www.amsat.org/amsat/sats/n7hpr/fo20.html
[01152007]
��WO-18 WEBERSAT
Catalog Number: 20441
Launch Date: January 22, 1990

Status: Non-Operational

Downlink: 437.104 MHz SSB 1200 Baud PSK AX.25
[05012006]
��DO-17 Dove
Catalog Number: 20440
Launch Date: January 22, 1990

Status: Non-operational.

Downlink: 145.825 MHz FM 1200 Baud AFSK
Beacon: 2401.220 MHz
[05012006]
��AO-16 PACSAT
Catalog number: 20439
Launch Date: January 22, 1990

Status: non-operational

Current Mode: V/u

Uplink: 145.900 MHz FM 1200-baud Manchester FSK (reserved)
145.920 MHz FM VOICE
145.940 MHz FM 1200-baud Manchester FSK (reserved)
145.960 MHz FM 1200-baud Manchester FSK (reserved)

Downlink: 437.026 MHz USB VOICE
(1200-baud PSK - MBL Telemetry Only)

Mode-S Beacon: 2401.1428 MHz [NO FUTURE OPERATIONS PLANNED]

Mode and Antenna Polarization:
U: RC 437.050 MHz RHCP
PSK 437.026 MHz LHCP
V: Linear

Broadcast Callsign: PACSAT-11
BBS: PACSAT-12

AO-16 AMSAT Webpage: http://www.amsat.org/amsat/sats/n7hpr/ao16.html
[07242009]
��UO-15 UoSAT-4
Catalog Number: 20438
Launch Date: January 22, 1990

Status: Non-operational

Uplink: ?
Downlink: 435.1250MHz (?)
435.1200MHz (?)
[06042009]
��UO-14 UoSAT-3
Catalog number: 20437
Launch date: January 22, 1990

Status: Non-operational

Uplink: 145.975 MHz FM
Downlink: 435.070 MHz FM
[05092004]
��FO-12 Fuji-OSCAR 12
Catalog Number: 16909
Launch Date: August 12, 1986

Status: Non-Operational

Mode V/U (J) Linear Transponder (Inverting):
Uplink: 145.9000 - 146.0000 MHz SSB/CW
Downlink 435.8000 - 435.9000 MHz SSB/CW

Mode V/U (J) Packet:
Uplink: 145.8500 MHz MFSK 1200 BPS
Uplink: 145.8700 MHz MFSK 1200 BPS
Uplink: 145.8900 MHz MFSK 1200 BPS
Uplink: 145.9100 MHz MFSK 1200 BPS

Downlink 435.9100 MHz PSK 1200 BPS

Telemetry Beacon: 435.7950 MHz SSB/CW
[01152007]
��AO-10 OSCAR 10
Catalog number: 14129
Launch Date: June 16, 1983

Status: Non-operational

Uplink: 435.030 to 435.180 MHz CW/LSB
Downlink: 145.975 to 145.825 MHz CW/USB

Beacon: 145.810 MHz (unmodulated carrier)

W4SM has more information about the satellite at the following URL:
http://www.cstone.net/~w4sm/AO-10.html
[05092004]

��AO-8 AMSAT-OSCAR 8
Catalog Number: 10703
Launch Date: March 3, 1978

Status: Non-Operational

Mode V/U (J) Linear Transponder (Non-Inverting): Non-Operational
Uplink: 145.9000 - 146.0000 MHz SSB/CW
Downlink 435.1990 - 435.2000 MHz SSB/CW

Mode V/U (J) TLM Beacon: Non-Operational
Downlink 435.0950 MHz CW

Mode V/A (A) Linear Transponder (Non-Inverting): Non-Operational
Uplink: 145.8500 - 145.9000 MHz SSB/CW
Downlink 29.4000 - 29.5000 MHz SSB/CW

Mode V/A (A) TLM Beacon: Non-Operational
Downlink 29.4020 MHz CW
[01152007]
��AO-6 AMSAT-OSCAR 6
Catalog Number: 06236
Launch Date: October 15, 1972

Status: Non-Operational

Uplink: 145.9000 - 146.0000 MHz SSB/CW
Downlink: 29.4500 - 29.5500 MHz SSB/CW
Beacons: 29.450 MHz
435.100 MHz
[01312008]
��AO-5 Australis-OSCAR 5
Catalog Number: 04321
Launch Date: January 23, 1970

Status: Non-Operational

Telemetry Beacons: 144.0500 MHz CW
29.4500 MHz CW
[01152007]
��OSCAR III
Catalog Number: 01293
Launch Date: March 09, 1965

Status: Non-Operational

Uplink: 145.9750 - 146.0250 MHz SSB/CW
Downlink: 144.3250 - 144.3750 MHz SSB/CW
[01012007]
��RS-15 RADIO SPORT RS-15
Catalog number: 23439
Launch Date: December 26, 1994

Status: Non-operational

Uplink: 145.858 to 145.898 MHz CW/USB
Downlink: 29.354 to 29.394 MHz CW/USB

Beacon 1: 29.352 MHz (intermittent)
Beacon 2: 29.398 MHz

SSB meeting frequency: 29.380 MHz (unofficial)
[06202004]
��RS-13 RADIO SPORT RS-13
Catalog number: 21089
Launch date: February 5, 1991

Status: Non-operational

Uplink: 21.260 to 21.300 MHz CW/USB
Downlink: 145.860 to 145.900 MHz CW/USB

Beacon: 145.860 MHz

Robot: 145.908 MHz
[05232004]
��RS-12 RADIO SPORT RS-12
Catalog number: 21089
Launch date: February 5, 1991

Status: Non-operational

Uplink: 21.210 to 21.250 MHz CW/USB
Downlink: 29.410 to 29.450 MHz CW/USB

Beacon: 29.408 MHz

Robot: 29.454 MHz
[05232004]
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ANS is released worldwide via the AMSAT ANS e-mail reflector and a live radiocast on the AMSAT-NA 20-meter net held each Sunday on 14.282 MHz. Pre-net operations start at 18:00 UTC, with current ANS bulletins transmitted to the eastern U.S. at 19:00 UTC and to the western U.S. at 19:30 UTC.

Information on AMSAT-NA is available at the following URL:
http://www.amsat.org

Mailing address:
AMSAT-NA
850 Sligo Avenue, Suite 600
Silver Spring, Maryland 20910-4703

Voice: 301-589-6062
888-322-6728
FAX: 301-608-3410

Currently, AMSAT-NA supports the following (free) mailing lists:

* AMSAT News Service (ANS)
* General satellite discussion (AMSAT-BB)
* Orbit data (KEPS)
* Manned space missions (SAREX)
* District of Columbia area (AMSAT-DC)
* New England area (AMSAT-NE)
* AMSAT Educational Liaison mailing list (AMSAT-EDU)
* AMSAT K-12 Educational Liaison mailing list (AMSAT-K12)

A daily digest version is available for each list.

To subscribe, or for more list information, visit the following URL:
http://www.amsat.org/mailman/listinfo/ans

In addition to regular membership, AMSAT-NA offers membership in the President's Club. Members of the President's Club, as sustaining donors to AMSAT Project Funds, will be eligible to receive additional benefits. Application forms are available from the AMSAT-NA Office.

This week's Weekly Satellite Report Editor is James French, W8ISS.

ANS is always dedicated to past ANS editor 'BJ' Arts, WT0N, and to the memory of longtime AMSAT supporters Werner Haas, DJ5KQ, Dennis Kitchen, G0FCL and John Branegan GM4IHJ.

Please send any amateur satellite news or reports to: ans-editor{at}
amsat.org
NNNN
/EX

46. ANS-071 AMSAT News Service Weekly Bulletins

Newsgroup: rec.radio.amateur.space
Date: 2012-03-11 02:20:52 UTC
From: JoAnne Maenpaa <k9jkm@comcast.net>
Message-ID: <001301ccff2d$8f3750c0$ada5f240$@net>
Source record: 196
Cross-posted to: rec.radio.amateur.space,rec.radio.info

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AMSAT NEWS SERVICE
ANS-071

ANS is a free, weekly, news and information service of AMSAT North
America, The Radio Amateur Satellite Corporation. ANS reports on the
activities of a worldwide group of Amateur Radio operators who share an
active interest in designing, building, launching and communicating
through analog and digital Amateur Radio satellites.

Please send any amateur satellite news or reports to:
ans-editor@amsat.org

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SB SAT @ AMSAT $ANS-071.01
ANS-071 AMSAT News Service Weekly Bulletins

AMSAT News Service Bulletin 071.01
>From AMSAT HQ SILVER SPRING, MD.
March 11, 2012
To All RADIO AMATEURS
BID: $ANS-071.01

**********************************************************************
* Volunteers are needed to help at the AMSAT booth at Dayton. Gould *
* WA4SXM, is looking for volunteers to help man the AMSAT booth dur- *
* ing the 2012 Hamvention. People are needed all 3 days for 2 hour *
* shifts. Please send the days and times you are available to help *
* as well as how many shifts you are willing to work via e-mail to *
* wa4sxm at amsat.org. *
* Monitor http://www.amsat.org/amsat-new/hamvention/2012/Dayton.php *
* for the latest AMSAT at Dayton news and developments *
**********************************************************************

Howard Long, G6LVB featured speaker at the 2012 AMSAT/TAPR Banquet
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TAMSAT/TAPR Banquet on Friday night, May 18 is one of the main AMSAT activities during the 2012 Hamvention at Dayton.

AMSAT is pleased to announce that Howard Long, G6LVB will be the featured speaker for the evening event. Howard will be talking about his FUNcube Dongle, the 64 - 1700 MHz Software Defined Receiver. This innovative USB device is the size of a thumbdrive and has an SMA antenna socket. Multiple SDR control and display software programs can be used with the FUNcube Dongle.

Banquet tickets will not be sold at the AMSAT booth during the Hamvention so reservations must be made through the AMSAT Store:
http://www.amsat-na.com/store/item.php?id0158
Tickets are $30 apiece.

[ANS thanks Gould Smith, WA4SXM for the above information]

AMSAT-NA Receives US Space Command Authorization for Keps Distribution

AMSAT's Keeper of the Keps, Ray Hoad, WA5QGD wrote, "I am pleased to announce that AMSAT's request to re-distribute AFSPC Keplerian elements from SpaceTrack has been approved for the period April 1, 2012 to April 1, 2013. Our USSTRATCOM ODR (Orbital Data Request) to distribute the KEPs was approved on March 1, 2012. We are "good to go" for another year."

Thanks to the US Air Force Space Command, Perry Klein, W3PK and Paul Williamson, KB5MU for their help in this process.

[ANS thanks Ray Hoad, WA5QGD for the above information]

AMSAT-UK Announces Colloquium 2012 & Issues First Call for Speakers

The AMSAT-UK International Space Colloquium will be held on September 14-16, 2012.

The colloquium attracts an international audience from across Europe as well as North America and the Middle East. Attendees range from the builders of the CubeSats and Nanosats, those who communicate through them and beginners who wish to find out more about this fascinating branch of the hobby.

It provides a rare opportunity to chat with satellite designers and builders, discussions frequently continue until the early hours of the morning.

A Gala dinner is held on the Saturday evening along with the fund raising auction.

AMSAT-UK invite speakers, about amateur radio space and associated activities, for this event. They are also invited to submit papers for the ‘Proceedings’ document which will be published at the same

time but printed papers are not mandatory. We normally prefer authors to present talks themselves rather than having someone else give them in the authors' absence. We also welcome 'unpresented' papers for the Proceedings document.

FIRST CALL FOR SPEAKERS

This is the first call for speakers for the AMSAT-UK International Space Colloquium 2012 which, due to the Olympic & Paralympic Games, will be held this year on the weekend of September 15-16, 2012 at the Holiday Inn, Guildford, GU2 7XZ, United Kingdom.

This Colloquium will take place a few weeks before the planned launch of AMSAT-UK's FUNcube-1 satellite carrying a 435/145 MHz linear transponder for SSB/CW communications.

AMSAT-UK invites speakers, to cover topics about micro-satellites, CubeSats, Nanosats, space and associated activities, for this event.

They are also invited to submit papers for subsequent publishing on the AMSAT-UK web site. We normally prefer authors to present talks themselves rather than having someone else give them in the authors' absence. We also welcome 'unpresented' papers for the web site.

We appreciate that it is not always possible to give a firm indication of attendance at this stage but expressions of interest would be appreciated.

Submissions should be sent *ONLY* to G4DPZ, via the following routes:

e-mail: david dot johnson at blackpepper dot co dot uk

Postal address at http://www.qrz.com/db/G4DPZ

AMSAT-UK also invite anyone with requests for Program Topics to submit them as soon as possible to G4DPZ. Invitations for any papers on specific subjects will be included in the future call. Likewise if anyone knows of a good speaker, please send contact and other information to G4DPZ.

[ANS thanks Dave Johnson, G4DPZ and AMSAT-UK for the above information]

New Satellite Group Formed in Cuba

Hector Martinez, CO6CBF reports that the Cuban Amateur Radio Federation (FRC) has created its first official Satellite Group.

Hector said that himself, Raydel CM2ESP, and Pavel CO7WT worked to form the group and made the request to the FRC headquarters. The request was approved on March 3, 2012. The official name is Grupo de Radioaficionados para Operaciones Satelitales (GROS).

The principal mission is to promote amateur radio by satellites in Cuba and motivate Cuban hams to operate on the satellites.

Grupo de Radioaficionados para Operaciones Satelitales is planning their first meeting in Havana City, Cuba.

[ANS thanks Hector Martinez, CO6CBF for the above information]

India VO-52 Satellite Recovery in Progress

Mani, VU2WMY, Secretary & Station-In-Charge at the Upagrah Amateur Radio Club VU2URC in India reported that on March 6 the ISRO Satellite Centre recovered operation and control of HAMSAT VO-52. This satellite had been heard during expected passes since February 28.

Mani wrote, "I can share at this moment is 'HAMSAT VO-52' is in 'Excellent Health' after recovery operations. Right now, it is under observation. The decision in regards to switching 'ON' the transponder is pending clearance from ISRO. This decision expected soon. The user community will be informed well in advance about the transponder switching."

ISRO Announces Plan to Turn on Dutch Transponder

On March 8, Mani, VU2WMY, reported that news had been received from Mr. T. Parimalarangan, HAMSAT VO-52 Operations Director at ISTRAC/ISRO that, "After 'In-Orbit Maintenance Operations' the decision to turn 'ON' Transponder No 2 i.e. The Dutch Transponder made by William Leijenaar PE1RAH on March 8 during orbit # 37006 over India."

Dutch Transponder Activation on Hold for One Week

Unfortunately, we are sorry to inform that the 'Expert Committee' overseeing the VO-52 (HAMSAT) performance has advised to extend the 'Observation Period' by an other week.

Hence, the decision to switch on the transponder # 2 is now put 'ON HOLD' till further notice. Inconvenience caused to the users is regretted.

This latest decision is just only a postponement and nothing to worry about the health of the spacecraft. We re-assure you all that VO-52 is very strong and in a 'Perfect Health' condition.

Once the Dutch transponder is switched on it will use the following frequencies:

Uplink frequency: 435.250 MHz
Downlink frequency: 145.900 MHz
Beacon: CW at 145.859330 MHz (145.86 MHz)
Output level of Beacon Carrier: 18 dBm

ISRO invites a 'Critical Comparative Signal Report' between the
Indian and Dutch transponder would be of great help for further
evaluations and necessary actions for the maintenance the trans-
ponder in good and healthy condition for better services and also,
the inputs would be very valuable to the respective transponder
designers. Please send your feedback to tprangan@istrac.org.

Summaries from stations monitoring for VO-52 can be entered and viewed
on the Live OSCAR Satellite Status Page: http://oscar.dcarr.org/

[ANS thanks Mani, VU2WMY, Secretary & Station-In-Charge at the
Upagrah Amateur Radio Club for the above information]

March 17 for AMSAT-LU Balloon Test Flight of LUSEX Satellite Systems

AMSAT-Argentina announced they are planning to test systems of the
LU Satellite EXperiment (LUSEX) satellite during a high altitude
balloon flight up to 100,000 feet. This is scheduled for March 17
at 1500 UTC. Direct reception of the balloon flight is estimated to
extend to 400 miles from the City of Junin, west of Buenos Aires,
Argentina. (See http://www.amsat.org.ar/junincubr.jpg for estimated
coverage map.)

The payload will feature several radio and telemetry experiments:

+ Crossband FM Repeater
Uplink 435.950 MHz FM (123 Hz tone)
Downlink 145.950 MHz FM

+ SSTV Downlink 145.950 MHz FM
ROBOT-36 in real time, showing the view from the balloon every
5 minutes during ascent/descent, longer interval at high alti-
tude. Video will also be recorded and recovered at the end of
the flight.

+ APRS Data
APRS 1200 baud packet on 144.930 MHz, and 145.950 MHz.

+ Telemetry Downlink 145.950 MHz
If the crossband repeater is in use a warning bip at 40 seconds
will indicate telemetry is coming, which is sent if the repeater
is not in use. If the repeater continues to be busy then 2 bips
will indicate APRS packets will be sent.

CW telemetry (modulated FM on 145.950 MHz) will be sent every
5 minutes with the following sequence: CQ LU7AA, sequence number,
external and internal temperatures °C and battery voltage.

+ User Telecommand Experiment
The 435.950 up / 145.950 down crossband repeater will accept user
DTMF command to return a signal report. Sending B* on the uplink
will return S5 (average signal strength) or P10 (S9+10 signal
strength) modulated CW tones on the 145.950 MHz FM downlink.

APRS trajectory will update every minute, including speed, height, external and internal temperatures and 7.2v battery voltage. This can be monitored directly on 144.930 MHz for stations in range. It will also display at: http://aprs.fi/?call=7aa-11 . The APRS symbol will display as a balloon during ascent, and as a glider during parachute descent. The AMSAT-LU APRS Igate LU7AA-10 on 144.930 and 430.930 MHz will be active. Maps for UI-View APRS tracking can downloaded from http://www.amsat.org.ar.

Stations making a contact via the balloon payload may qualify for a certificate. See http://www.amsat.org.ar/certsat.html for details.

AMSAT-LU thanks the members of Radio Clubs of Junin, QRM Belgrano, APRS Group, Don Bosco Ramos Mejia School, gliders Clubs of Zarate, Junin and Ca=uelas, and the twelve Amsat-LU members development team. Reports from radio amateurs during previous flights are appreciated and they look forward to your reports during the March 17 flight.

Photos and reports of prior flights can be viewed on-line at: http://www.amsat.org.ar/lu4aao/experimento_globo_y_parapente.htm

The LU Satellite EXperiment web page is at: http://lusex.org.ar

[ANS thanks AMSAT-LU for the above information]

KB8VCO and W8ZCF ARISSat-1 SSTV Contact Featured in the Press

The Cincinnati (Ohio) Press web featured a story about the successful SSTV contact via ARISSat-1 between Farrell Winder, W8ZCF and his son, Jeff Winder, KB8VCO.

The Winders teamed together and after many, many tries were successful in sending and receiving a picture of Farrell Winder's automobile license plate.

The Winders used two computers, two radios, and two rotatable outside antennas on towers to aim and to pinpoint the satellite antenna. Conditions were challenging as the satellite was traveling at 18,000 MPH at an altitude of 225 miles, which provided a window of opportunity of only up to about nine minutes while its footprint was passing within range of Cincinnati.

The successful end result was a lot of hard-earned fun and excitement to work with very small signals from =outer space= and overcome the setback caused by the missing antenna on ARISSat-1.

The picture the Winders sent and received is apparently one of the only complete pictures sent and received. Two other operators tried a similar undertaking, but received just portions of pictures.

Since ARISSat-1 had no propulsion system to sustain altitude it entered the Earth's atmosphere on Jan. 4, 2012 and disintegrated.

The story can be read on-line at:
http://tinyurl.com/ARISSat-Cincinnati

[ANS thanks Farrell Winder, W8ZCF and Jeff Winder, KB8VCO for the above information]

Echolink Satellite Nets Launched

New Echolink SAT-CHAT Net

Vince Waelti, K9TSU has established a new, open net, the "Sat-Chat" on the *AMSAT* server on EchoLink. This net meets at 1900 Central US Time (UTC-5) every Saturday evening. Everyone is invited to check in. Also links to -L and -R systems for on-air repeater coverage are welcome. Vince can be reached at k9tsu(at)hotmail(dot)com if you have any questions.

Hudson Valley SatCom Net on Echolink

Stu Ballinger, WA2BSS says the next Hudson Valley SatCom net will meet on-air (146.97 MHz. Mt. Beacon Repeater) and on the Echolink node N2EYH-L on March 15 at 2000 Eastern US time (UTC-4).

Houston AMSAT Net on Echolink

The Houston AMSAT Net meets on the Echolink *AMSAT* server every Tuesday evening at 2000 Central US Time (UTC-5). Checkin to the net is taken via Echolink if you are not in radio range of Houston.

[ANS thanks Vince Waelti, K9TSU; Stu Ballinger, WA2BSS; and Bruce Paige, KK5DO for the above information]

Satellite Shorts From All Over

+ Watch the CQ Magazine Newsroom (http://www.cqnewsroom.blogspot.com/) for more coverage of amateur radio in space. Recent coverage on CQ's Newsroom blog included:
NASA to Launch Fox-1 Cubesat
http://tinyurl.com/CQBlog-Fox (cqnewsroom.blogspot.com)
Vega Rocket Launches Nine Satellites
http://tinyurl.com/CQBlog-Vega (cqnewsroom.blogspot.com)

+ Watch AMSAT's Lou McFadin, W5DID interview on HamRadioNow by Gary Pearce, KN4AQ on Southgate ARC's web: http://tinyurl.com/LouMcFadin Lou describes the features of the ARISSat-1 satellite, using the operational model at the AMSAT booth at the Orlando HamCation.

+ Paul, 2E1EUB says his next mobile satellite operations as 2M1EUB from his van will be starting March 24 for 7 days from the east coast of Scotland. Main operations are planned for AO-7 Mode A/B and other satellites as available. Paul will post his latest infor-

mation on amsat-bb and also on the lookup at QRZ.com for 2M1EUB.

+ This is a reminder to consider making your donation to help AMSAT-UK build the FUNcube Project, an amateur radio satellite that features a 435 to 145 MHz Linear Transponder for SSB/CW operation. the Virgin Giving charity donation website http://tinyurl.com/funcubegiving/ A donation link is also at http://www.uk.amsat.org/.

+ DQ0STRATEX is a special event call on the occasion of the stratospheric balloon project (StratexB) planned for March 2012 by the local DARC clubs Duelmen (N28) and Luedinghausen (N29). They plan to fly an amateur radio load, consisting of an APRS beacon operating on 144.800 MHz and a FM speech beacon operating on 430.375 MHz to the stratosphere on March 24 around 1600 UTC from the airport at Borkenberge near Luedinghausen. Hams from the German Aerospace Center (DLR) in Bremen will also fly an experimental ADS-B receiver. DQ0STRATEX plans to be active on all bands and all modes between now and January 31, 2013.

+ If you ever wondered if the astronauts on the ISS could see you shining a light at them you'll get your answer here. On March 4, about 65 amateur astronomers were in position at the Lazano Observatory in Springbranch Texas (near San Antonio). They turned on searchlights and waited as the ISS was set to make an appearance in the sky. Astronaut Don Pettit, KD5MDT had no trouble seeing the flashes. Watch the video at: http://tinyurl.com/ISS-Flash (UniverseToday.com)

+ NASA invites you watch the 2012 Exploring Space Lectures held at the National Air and Space Museum in Washington, D.C. live on the web:

Big Bang for the Buck: Cosmology from WMAP
March 22, 2012, at 8 p.m. EDT (UTC-4)
http://www.nasm.si.edu/events/eventDetail.cfm?eventID725.

The Little Satellite That Could
April 11, 2012, at 8 p.m. EDT (UTC-4)
http://www.nasm.si.edu/events/eventDetail.cfm?eventID726.

Gamma Ray Bursts and the Birth of Black Holes
May 16, 2012, at 8 p.m. EDT (UTC-4)
http://www.nasm.si.edu/events/eventDetail.cfm?eventID727.

Seeking Planets Like Earth
June 5, 2012, at 8 p.m. EDT (UTC-4)
http://www.nasm.si.edu/events/eventDetail.cfm?eventID728.

+ NASA announces the release of the ISSLive! app for iPhone, iPad and Andoid. This innovative, interactive app provides a novel way to learn about the International Space Station while on the go.

The ISS Live! app delivers live streaming data from the International Space Station. Users can take a virtual 3-D tour of the Mission Control Center and the space station, and view mission control console displays with real-time data. Interactive educational lessons using the data, as well as crew and science timelines with individual crew member, social media and international science experiment details are also available via the app.

To learn more and find links to download the ISSLive! app, visit http://spacestationlive.jsc.nasa.gov where you will find the icons for the iPhone App Store and the Android Market. (iPad and iPhone are trademarks of Apple Inc., registered in the U.S. and other countries. Android is a registered trademark of Google Inc.
- NASA Education Express Message -- March 8, 2012

+ Here is an interesting video with the caption, "Is this the best video footage ever of photos taken from the International Space Station? ISS astronaut and Expedition 29 commander Mike Fossum seems to think so." Fly over the earth at: http://www.universetoday.com/93828/the-best-iss-video-ever-you-decide/ The video is a series of time lapse photos of Earth at night as seen from the ISS.

+ The 16th Annual SVHFS Conference will be held in Charlotte, North Carolina April 20-21. In addition to the technical activities the conference will feature a keynote address by ARRL President, Kay Craigie, N3KN at lunch on Saturday. The banquet speaker will be 1993 Nobel Prize in Physics laureate Dr. Joe Taylor, K1JT. See http://www.svhfs.org/ for more details and to register.

+ March 13-22 marks the next GLOBE at Night sky survey for students and citizen scientists. Information how to participate, sky charts, and software applications can be found at: http://www.globeatnight.org.

+ Although the New Space Fence radar is still 5 years away from full operation Lockheed Martin has posted a cool video of the prototype at http://tinyurl.com/SpaceFence (youtube). UniverseToday has posted an article with more details and associated links at: http://tinyurl.com/UniverseTodayRadar (UniverseToday.com).

+ Check out the article written by a teenage ham, "How to Work the Amateur FM Satellites" by Vince Waelti, K9TSU, posted at: http://www.eham.net/articles/27718. Congratulations Vince on your publication.

[ANS thanks everyone for the above information]

Amateur Radio on the International Space Station (ARISS) Status Report
March 5, 2012

1.School Contacts

Dilworth Elementary School in San Jose, California had an Amateur Radio on the International Space Station (ARISS) contact on Monday, March 5 at 18:33 UTC. The ARISS contact is part of a comprehensive education plan which will pique students' interest in Science Technology, Engineering and Math (STEM).

An Amateur Radio on the International Space Station (ARISS) contact was held with ESA ESTEC in Noordwijk, Netherlands on Tuesday, March 6 at 13:11 UTC via station ON4ISS in Belgium. The radio activity is part of an educational program around Andr&#65533; Kuipers' mission Spaceship

Earth which targets children who are 10-14 years of age. Part of this program consists of mission assignments Kuipers gives to Dutch school children. The winners of each challenge will be invited to the radio contact. Other activities include lessons and experiments.

2. ESA Awards ARISS Contact to Winners of Competition

Students from three schools, the American School of the Hague, the International School of Amsterdam and the British School in the Netherlands, took part in an Amateur Radio on the International Space Station (ARISS) contact on Monday, February 27 via station IK1SLD in Italy.

This ARISS contact with astronaut Andr&#65533; Kuipers was offered as a prize

by the European Space Agency (ESA) to those schools who submitted the best suggestions for experiments or demonstrations that could be performed in microgravity on board the ISS using common everyday items. The youth were given lessons on radio signals and communications which involved local radio ham experts.

3. Atlanta, Georgia Youth Radio ISS Astronaut

On Friday, March 2, an Amateur Radio on the International Space Station (ARISS) contact was held between astronaut Don Pettit, KD5MDT on the ISS and Parkside Elementary School in Atlanta, Georgia. The radio link was provided by station K6DUE in Greenbelt, Maryland. Questions were asked concerning the education and training needed to become an astronaut and about how space affects one's appetite and sleep. The contact was part of a comprehensive education plan using NASA related activities to pique students' interest in Science, Technology, Engineering and Math (STEM). Audio was carried live on the NASA TV hour. East Atlanta Patch posted an article on the contact. http://eastatlanta.patch.com/articles/parkside-elementary-to-international-space-station-over#video-9240102

4. Pettit Chats with Greek Students via ARISS

Students attending the 5th Geniko Lykeio Katerinis in Katerini, Greece experienced a successful Amateur Radio on the International Space Station (ARISS) contact on Friday, March 2. The youth spoke with Don Pettit about the experiments onboard the ISS and asked how he communicates with his family during his mission. The contact complemented lessons covering astronomy and amateur radio with special

attention given to the ISS regarding its role in humanity and science, its orbit and the every day life of the astronaut. ISS courses were based on ESA's education tool "ISS Education Kit." Five hundred were in attendance and another hundred connected to the internet to view the streaming video. Media coverage included two television stations.

5. Amateur Radio Newsline Covers ARISS

On March 2, Amateur Radio Newsline report #1803 carried an article about the recent ARISS contact held during the John Glenn Event in Perth, Australia. The event celebrated the 50th anniversary of John Glenn's orbit of the Earth, when the population of Perth turned on its lights and Glenn observed the city was visible from space, leading to Perth's nickname, "City of Lights." To view, "Ham Radio in Space: Amateur Radio Celebrates John Glenn over Perth Australia," see: http://www.arnewsline.org/storage/scripts/nsln1803.txt

[ANS thanks Carol, KB3LKI, for the above information]

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In addition to regular membership, AMSAT offers membership in the President's Club. Members of the President's Club, as sustaining donors to AMSAT Project Funds, will be eligible to receive additional benefits. Application forms are available from the AMSAT Office.

Primary and secondary school students are eligible for membership at one-half the standard yearly rate. Post-secondary school students enrolled in at least half time status shall be eligible for the student rate for a maximum of 6 post-secondary years in this status. Contact Martha at the AMSAT Office for additional student membership information.

And, with that please keep in mind that the Sun accounts for 99.8% of the Solar System's mass. 1,300,000 Earths could fit inside of the Sun. Jupiter is as big as the Sun's core. 1,300 Earth's could fit inside of Jupiter.

73,
This week's ANS Editor,
JoAnne Maenpaa, K9JKM

47. Weekly Highlights of Solar and Geomagnetic Activity, 05 - 11 March 2012

Newsgroup: rec.radio.amateur.space
Date: 2012-03-13 19:30:14 UTC
From: SWPC.Webmaster@noaa.gov
Message-ID: <20120313193001.8E4A233C93@panix2.panix.com>
Source record: 197
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.dx,rec.radio.amateur.space,rec.radio.shortwave,rec.radio.info

```
:Product: Weekly Highlights and Forecasts
:Issued: 2012 Mar 13 1539 UTC
# Prepared by the US Dept. of Commerce, NOAA, Space Weather Prediction Center
# Product description and SWPC contact on the Web
# http://www.swpc.noaa.gov/weekly.html
#
# Weekly Highlights and Forecasts
#
Highlights of Solar and Geomagnetic Activity
05 - 11 March 2012

Solar activity ranged from low to high levels during the period.
Activity was at high levels during 05 - 07 and 09 - 10 March due
mostly to a series of long-duration major flares from Region 1429
(N18, L=301, class/area Dkc/1270 on 07 March) which included an
X1/2b at 05/0409Z, an X5/3b at 07/0024Z, an M6 at 09/0353Z, and an
M8 at 10/1744Z. All four flares were associated with Earth-directed
CMEs. Region 1429 was large and magnetically complex during the
period, exhibiting a beta-gamma-delta configuration with multiple
deltas. It appeared to slowly decay during 09 - 10 March, but
retained much of its magnetic complexity. Region 1430 (N20, L=315,
class/area Dai/200 on 07 March) produced an X1/Sf at 07/0114Z during
a period of rapid development. Region 1430 appeared to be in a
gradual decay phase during 08 - 10 March.

The period began with a greater than 10 MeV proton enhancement in
progress. This increase from normal backgrounds was associated with
a long-duration M2/1n flare that occurred prior to the period and
sourced from Region 1429. The flux enhancement continued until the
onset of greater than 100 MeV and greater than 10 MeV events early
on 07 March associated with the X5/3b flare at 07/0024Z. The greater
than 100 MeV event began at 07/0405Z, reached a maximum of 69 pfu at
07/1525Z, and ended at 10/1650Z. Also, a greater than 10 MeV event
began at 07/0510Z, reached a maximum of 6530 pfu at 08/1115Z, and
was in progress at the close of the period.

The greater than 2 MeV electron flux at geosynchronous orbit was at
normal to high levels during 05 - 06 March. Flux readings were
unreliable during 07 - 09 March due to proton contamination. Fluxes
were at moderate to high levels on 10 and 11 March.

Geomagnetic field activity was at quiet to severe storm levels
during the period. Quiet to unsettled levels occurred during 05 - 06
March with brief minor storm periods observed at high latitudes.
```

Activity increased to unsettled to major storm levels on 07 March following a geomagnetic sudden impulse (SI) at 07/0427Z. The SI measured 20 nT at the Boulder magnetometer. This enhanced activity was due to a CME arrival associated with the X1/2b flare on 05 March. Quiet to minor storm levels occurred on 08 March, with major storm periods at high latitudes, as another CME, associated with the X5/3b on 07 March, impacted the geomagnetic field with an SI, as measured by the Boulder magnetometer of 59 nT, at 08/1105Z. Activity increased to quiet to severe storm levels on 09 March due to sustained southward IMF Bz combined with increased IMF Bt as CME effects persisted. Activity decreased to quiet to minor storm levels with major storm periods at high latitudes on 10 March as CME effects gradually subsided. A return to quiet levels was observed on 11 March.

Forecast of Solar and Geomagnetic Activity
14 March - 09 April 2012

Solar activity is expected to be at low levels during 14 - 16 March with a chance for M-class activity from Region 1429. Activity is expected to decrease to predominantly background levels during 17 - 27 March, following the departure of Region 1429 on 15 March. An increase to low levels with a slight chance for M-class activity is expected from 28 March through the end of forecast period, as Region 1430 returns on 28 March and Region 1429 returns on 29 March.

A chance exists for another proton event from 14 - 16 March, as Region 1429, rotates off the visible disk. No events are expected until Region 1429 returns on 29 March, when a slight chance for another event from this proton producing region exists through the end of the forecast period.

The greater than 2 MeV electron flux at geosynchronous orbit is expected to be at moderate to high levels during 14 - 19 March and 29 March - 03 April. Normal to moderate flux levels are expected during 20-28 March and 04 - 07 April.

Geomagnetic field activity is expected to be at predominantly quiet levels from 14 - 16 March. Activity is expected to increase to quiet to active levels during 17 - 18 March due to recurrent coronal hole high-speed stream effects. Activity is expected to decrease to mostly quiet levels during 19 - 27 March. Quiet to unsettled levels are expected during 28 - 31 March as another coronal hole high speed stream becomes geoeffective. A return to quiet levels is expected from 01- 02 April. Another increase to quiet to unsettled levels is expected on 03 - 04 April as a coronal hole high speed stream becomes geoeffective. A return to predominantly quiet levels is expected to prevail for the remainder of the period.

48. ANS-078 AMSAT News Service Weekly Bulletins

Newsgroup: rec.radio.amateur.space
Date: 2012-03-18 14:15:39 UTC
From: JoAnne Maenpaa <k9jkm@comcast.net>
Message-ID: <000d01cd0511$92a6f2d0$b7f4d870$@net>
Source record: 198
Cross-posted to: rec.radio.amateur.space,rec.radio.info

AMSAT NEWS SERVICE
ANS-078

ANS is a free, weekly, news and information service of AMSAT North America,
The
Radio Amateur Satellite Corporation. ANS reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in
designing, building, launching and communicating through analog and digital
Amateur Radio satellites.

Please send any amateur satellite news or reports to:

ans-editor@amsat.org

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* Volunteers are needed to help at the AMSAT booth at Dayton. Gould *
* WA4SXM, is looking for volunteers to help man the AMSAT booth dur- *
* ing the 2012 Hamvention. People are needed all 3 days for 2 hour *
* shifts. Please send the days and times you are available to help *
* as well as how many shifts you are willing to work via e-mail to *
* wa4sxm at amsat.org. *
* Monitor http://www.amsat.org/amsat-new/hamvention/2012/Dayton.php *
* for the latest AMSAT at Dayton news and developments *
****

In this edition:
* IARU Announces New Amateur Satellite Frequency Coordination Form
* Watch for Packets from US Naval Academy Ice Goat 1 Buoy
* India HAMSAT VO-52 Recovery Successful
* International Effort at Sea Gets UT1FG/MM Back on Satellites
* Open Source CubeSat Space Protocol Flight Test Aboard GOMX-1
* RAX-2 Amateur Radio Cubesat Scientific Successful
* Satellite Shorts From All Over
* ARISS Status Report - 12 March 2012

SB SAT @ AMSAT $ANS-078.01
ANS-078 AMSAT News Service Weekly Bulletins

AMSAT News Service Bulletin 078.01
From AMSAT HQ SILVER SPRING, MD.
March 18, 2012
To All RADIO AMATEURS

BID: $ANS-078.01

IARU Announces New Amateur Satellite Frequency Coordination Form

Frequency coordination for amateur radio satellites is provided by the International Amateur Radio Union (IARU) through its Satellite Advisor, an official appointed by the IARU Administrative Council, its top policymaking body. This post is currently held by Hans van de Groenendaal, ZS6AKV.

Hans describes his role, "The IARU Satellite Advisor is assisted by an Advisory Panel of qualified amateurs from all three IARU Regions. The panel meets regularly via Skype to consider amateur satellite frequency coordination requests for satellites planned for operation on frequencies in the amateur service. The panel members often provide advice and assist satellite builders with the selection of the best possible frequencies to meet the objectives of their mission."

The Amateur Satellite Frequency Coordination request form has been updated (Version 27) and is available for download from: http://www.iaru.org/satellite.

On the IARU web satellite page there are also available a number of guideline documents which will assist satellite builders, including a document on the ITU requirements for Amateur Radio Satellites.

The list of amateur radio satellites coordinated by the IARU is posted on-line at: http://www.amsat.org.uk/iaru

[ANS thanks Hans van de Groenendaal, ZS6AKV for the above information]

Watch for Packets from US Naval Academy Ice Goat 1 Buoy

This month a group of Oceanography and Aeronautical engineering students from the US Naval Academy, led by Lt. Commander John Woods, a military instructor in oceanography, deployed a buoy rigged to monitor weather in the harsh conditions of the arctic. They delivered the "Ice Goat 1," buoy to the northern part of Alaska traveling by plane, then helicopter and finally snowmobile to the arctic ice off of the coast of Point Barrow, Alaska. Once the ice melts the bouy will begin its sea voyage.

Ice Goat 1 also carries an APRS beacon operating on 145.825 MHz. The position packets can be relayed via the ISS digipeater. However, the ISS only rises 1.5 degrees above the horizon at arctic latitudes. Reports of direct reception of the 145.825 MHz beacon are sought from any lucky Alaskan, and perhaps eventually Pacific Northwest amateur radio stations (depending on ocean current) who may be in range. Please send reports of reception to: wb4apr@amsat.org.

This week, W3ADO, the US Naval Academy Amateur Radio Club has posted a notice via the ISS digipeater:

W3ADO]APRS,RS0ISS-3*,qAR,N4XS-3::BLN1 :APRS Arctic Buoy in Barrow Alaska. Watch for pkts!

The science mission of this buoy will broadcast webcam images and measure a variety of environmental parameters including air temperature, barometric pressure, and possibly under ice acoustics. As the buoy collects information about the surrounding parameters all data will be compiled on an internal data logger and transmitted back to USNA using an Iridium satellite data link.

[ANS thanks Bob Bruninga, WB4APR for the above information]

India HAMSAT VO-52 Recovery Successful

A report received from the ISRO Satellite Centre at Bangalore, India on March 14 says the HAMSAT VO-52 is back on the air. Mani, VU2WMY wrote, "The commands to 'Turn On' the PE1RAH Dutch transponder was successfully sent during 14:00 UT 35 deg ascending node pass over Bangalore, India. The commands were successfully received, acknowledged and confirmed by telemetry. The beacon signal was heard loud and strong here at Bangalore."

Stations in Europe and North America reported good signals from VO-52 immediately after the transponder was activated. The beacon was heard with two-way contacts completed through the transponder.

The HAMSAT team requests detailed initial reports be sent to:: tprangan@istrac.org and a copy to wmy@isac.gov.in would be greatly appreciated.

HAMSAT VO-52 frequencies are:

Uplink: 435.2250 - 435.2750 MHz SSB/CW
Downlink: 145.9250 - 145.8750 MHz SSB/CW
Beacon: 145.8600 MHz CW

The CW beacon is sending: HI HI HI THIS IS VU SAT WITH THE DUTCH MODE UV TRANSPONDER MADE BY WILLIAM LEIJENAAR 73 DE PE1RAH

Upon successful recovery of VO-52 Mani, VU2WMY sent the following message on behalf of the HAMSAT team:

I take this opportunity to sincerely thank each and every user and well wishers, who have been following and monitoring closely all those events and activities that followed since the interruption on 28th February 2012.

Thanks for all those encouraging and supporting expressions!

The initial telemetry reports indicated all the crucial and critical parameters to be normal and satisfactory and we do

hope 'HAMSAT VO-52' would be available with much stronger power. The overall spacecraft health is in 'Excellent Condition' and all that we need to do is to monitor the transponder parameters.

14:05 UT on 14 March was a moment of great satisfaction and joy to all of us here in bringing 'HAMSAT VO-52'back to life. It also gives us great pleasure to note that 'HAMSAT VO-52'from India/ISRO has a earned a name in the history of 'Amateur Radio Satellites'.

On behalf of everyone, I take this opportunity to sincerely thank particularly, Mr. Parimalarangan-Operations Director for his hard work and great efforts besides his exemplary technical competence and skills exhibited in recovering back 'HAMSAT VO-52'.

Also my sincere thanks to Mission Director Mr. R. Suresh and the entire 'HAMSAT VO-52' Mission Management and Project teams for all the support, encouragement and recognition provided to 'Amateur Radio World'.

My Good wishes to VO-52 and the transponders on-board for a 'Healthy and Long Life'. My Good wishes & greetings, once again to William, PE1RAH.

[ANS thanks Mani, VU2WMY, Secretary & Station-In-Charge of the Upagrah Amateur Radio Club VU2URC at the ISRO Satellite Centre for the above information]

International Effort at Sea Gets UT1FG/MM Back on Satellites

This week John Papays, K8YSE shared an international amateur radio goodwill success story in getting Captain Yuri Bodrov, UT1FG/MM back on the air after a power supply failure at sea.

UT1FG/MM was enroute aboard his cargo ship from a Pacific port in Nicaragua bound for Montreal Canada via the Panama Canal and into the Gulf of Mexico. Yuri, an avid 6 meter and satellite operator, reported that his 12 volt power supply had failed shortly after leaving port.

John wrote, "The bad news was relayed amongst those of us who had been following Yuri and working him in wet grids as he traveled. Brainstorming started with ideas tossed around via emails. One idea was to buy a power supply and ship it Fedex to Yuri's agent in Panama and hope it got there in time. But Yuri felt that there would not be enough time for that to happen. We only had a few days."

Searching with Google and QRZ achieved contact with Captain Manolis Joannou, HP1CQ, also a sea captain and president of the Panama Canal Amateur Radio Association. Manolis was able to find a power supply that could operate off the 220 VAC ship mains and provide 12 volts to Yuri's IC-706 radio.

Captain Manolis made his way via a motor launch to Yuri's ship and hand delivered the new power supply. The two Captains spent an hour together before parting. Yuri was back on the air, working satellites from the Gulf of Mexico.

For a full story, complete with photos visit:
http://www.papays.com/sat/power/ut1fgpanama.html

[ANS thanks John Papays, K8YSE for the above information]

Open Source CubeSat Space Protocol Flight Test Aboard GOMX-1

Cubesat Space Protocol (CSP) is a small network-layer delivery protocol designed for Cubesats. The idea was developed by a group of students from Aalborg University in 2008. The protocol is based on a 32-bit header containing both transport and network-layer information. Its implementation is designed for, but not limited to, embedded systems such as the 8-bit AVR microprocessor and the 32-bit ARM and AVR from Atmel. The implementation is written in GNU C and is currently ported to run on FreeRTOS or POSIX operating systems like Linux and BSD.

GOMX-1, a 2U CubeSat designed and built by more than 15 students at Denmark's Aalborg University is expected to launch in late 2012 into a near sun syncronous orbit on a DNEPR rocket from Yasny in Russia with a number of other amateur radio satellites.

The GOMX-1 mission will qualify a number of satellite subsystems in space, providing extensive in-flight data. A camera payload will take color images of the Earth and an experimental Software Defined Radio receiver will be carried and its performance characterized. The mission will also test the use of the open source Cubesat Space Protocol for a complete mission including the space link.

GOMX-1 plans to use GMSK telemetry with selectable 1k2/2k4/4k8/9k6 rates on UHF with approx 28dBm power to a deployed antenna.

For more information refer to these web pages:

GOMX-1 web page: http://gomspace.com/

Cubesat Space Protocol: http://code.google.com/p/cubesat-space-protocol

Gunter's Space Page provides a calendar of planned launches for 2012:
http://space.skyrocket.de/doc_chr/lau2012.htm

[ANS thanks the GOMX-1 Team at Aalborg University for the above information]

RAX-2 Amateur Radio Cubesat Scientific Success

The University of Michigan RAX-2 amateur radio cubesat has achieved success in detecting the communication-disrupting anomaly in the upper atmosphere it was designed for.

On March 9, Matt Bennett KF6RTB reported on behalf of the RAX-2 team, "This is unbelievable!! After more than three years of hard work and dedication by my team and professor at Michigan, our chief scientist confirmed today that the RAX-2 spacecraft we designed, built, and launched into space has detected the communication-disrupting anomaly in the upper atmosphere that we've been looking for!"

The primary objective of the mission is to use the onboard radar receiver in conjunction with a powerful radar station in Alaska to study the formation of a plasma anomaly known for causing the scintillation of radio signals in the UHF and higher bands. This effect is known to inhibit our space radar tracking capabilities and ground-space communications. Studying this anomaly in this bi-static radar configuration (ground based transmitter, space-base receiver) will provide scientists with a better understanding of these anomalies that has not been achievable with ground radars alone.

Mark concludes, "The RAX Team would like to acknowledge and say thank you to the amateur radio satellite community for all of their support on this mission. We've really enjoyed interacting with fellow operators while collecting and analyzing telemetry. We've also learned a great deal about satellite operations from each other."

RAX-2: 437.345 MHz, 9600 bps GMSK http://rax.engin.umich.edu/

Mission Science Operations http://rax.sri.com/

RAX on Facebook http://www.facebook.com/RadioAuroraExplorer

[ANS thanks Mark Bennett KF6RTB and the RAX-2 team for the above information]

Satellite Shorts From All Over

+ A team of 10 operators, from the Aguas-Calientes Amateur Radio Club will activate Isabel Island, grid DL71, using the callsign XF1AA. The planned dates are March 16-21. Ismael, XE1AY, is one of the operators and is active on the satellites. If you should hear Ismael on the birds, please give him the air time to work as many as he can. (OPDX Bulletin 1050 & K8YSE)

+ Magyar OSCAR-72 (MO-72) has made the very first Hungarian photographs from space. Please visit: http://tinyurl.com/MO72-FirstPhotos (cubesat.bme.hu)

+ Mark Hammond, N8MH is hosting an AMSAT table at the RARSFEST in Raleigh, NC on Saturday, April 7. Mark is looking for volunteers to assist. If you can help with this AMSAT publicity effort con-

tact Mark at marklhammond@gmail.com.

+ Plan ahead for August: EMike McCardel, KC8YLD is looking for volunteers for the AMSAT presence at the Ohio State ARRL Convention which will be held Saturday August 4, 2012 in conjunction with Voice of Aladdin's Columbus Hamfest. Plans are being formed for a display table, satellite demos, and a speaker is needed for a satellite forum. If you are interested in helping out or would like to propose a forum talk please contact EMike at: kc8yld@amsat.org

+ Paul, 2E1EUB says his next mobile satellite operations as 2M1EUB from his van will be starting March 24 for 7 days from the east coast of Scotland. Main operations are planned for AO-7 Mode A/B and other satellites as available. Paul will post his latest information on amsat-bb and also on the lookup at QRZ.com for 2M1EUB.

+ Also Paul, 2E1EUB will be guest speaker at the Telford and District Amateur Radio Society (TDARS) on Wednesday, March 21, where he will give a talk about amateur radio satellites. In 2011 Paul was awarded the prestigious Louis Varney Cup for Advances in Space Communication, which was presented to him at the Telford Hamfest. More information is posted on Southgate: http://tinyurl.com/Telford-Talk

+ ISS astronaut Don Pettit, KD5MDT demonstrates physics in space in several videos posted on the 'Science off the Sphere' web pages. This is a partnership between NASA and the American Physical Society. Watch at: http://www.physicscentral.com/sots

+ Enjoy a flight over the northern lights aboard the ISS when you watch the video at: http://tinyurl.com/ISS-FlyOverAurora (SpaceDaily.com)

+ Central States VHF Society Conference is planned for July 26-29 in Cedar Rapids, Iowa. A conference hotel rate of $93 per night is being arranged. More information will become available as the web page at http://www.csvhfs.org/ is updated.

+ The 50 MHz and Up Group is hosting this year's Microwave Update Conference from October 18 to 21 in Santa Clara, CA. Check their web at: http://www.microwaveupdate.org for more info as it becomes available. Abstracts for papers, or requests for more information can be sent by e-mail to: mud2012papers at gmail dot com

+ Congratulations to Rick Tejera, K7TEJ on earning VUCC Satellite Award #227! Rick says, "Thanks to all who worked me over the past two years to get me here."

[ANS thanks everyone for the above information]

ARISS Status Report - 12 March 2012

1. Upcoming School Contacts

An ARISS contact has been scheduled for Istituto
Tecnologico Statale Trasporti e
Logistica "Leone Acciaiuoli", Ortona, Italy on Sunday, March 18 at
11:31
UTC.
The Ortona Maritime Institute "Leone Acciaiuoli" (I.T.N) is a
technical high
school that prepares the student for a career as a merchant ship officer
or
to
continue his university studies in the field of engineering disciplines.
Among
the subjects taught at the school are navigation, astronomy, celestial
navigation, satellite navigation, telecommunications (including
satellite
telecommunications), mathematics and physics. Since 1991, the Institute
has
taken part in the "International Day of Planetaria" which provides an
opportunity for educating the public in the areas of planetaria, science
and
technology. On this day, the public is able to visit the Planetarium,
laboratories, astronomical telescope and other
astronomical equipment. The ARISS
contact will be held as part of the day"s activities.

2. California Students Radio Dan Burbank on Space Station

On Monday, March 5, Dilworth Elementary School in San Jose, California
participated in an Amateur Radio on the International Space Station
(ARISS)
contact with Dan Burbank, KC5ZSX. Burbank fielded
19 questions put to him by the
students about the challenges encountered while living in space. The
contact
took place during the NASA Destination Station exhibit at The Tech
Museum
located nearby and complemented lessons on Science Technology,
Engineering
and
Math (STEM).

3. Astronaut Andr" Kuipers Answers Children"s Questions via ARISS

An Amateur Radio on the International Space Station (ARISS) contact was
held
between Andr" Kuipers and school children at the Space Expo in
Noordwijk,
Netherlands on Tuesday, March 6 via station ON4ISS in Belgium. The
radio
activity was part of an educational program around Kuipers" mission

Spaceship
Earth which targets youth who are 10-14 years of age. Part of this
program
consists of mission assignments that Kuipers gives to Dutch
schoolchildren.
The
winners of each challenge were invited to the radio contact. Other
activities
included lessons and experiments.

4. Hams who Experimented with ARISSat Make the News

Farrell and Jeff Winder, the father and son who helped in the
development of
SuitSat-1, made the news recently when they used
ARISSat's transponder and after
several tries, successfully sent and received a picture of Farrell
Winder's
automobile license plate. Community Press posted
the story, "Father, son team up
in 'outer space'." See:
http://communitypress.cincinnati.com/apps/pbcs.dll/article?AID"2/2012
0301/
NEWS
/303010057/

[ANS thanks Carol, KB3LKI, for the above information]

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In addition to regular membership, AMSAT offers membership in the
President's Club. Members of the President's Club, as sustaining
donors to AMSAT Project Funds, will be eligible to receive addi-
tional benefits. Application forms are available from the AMSAT
Office.

Primary and secondary school students are eligible for membership
at one-half the standard yearly rate. Post-secondary school students
enrolled in at least half time status shall be eligible for the stu-
dent rate for a maximum of 6 post-secondary years in this status.
Contact Martha at the AMSAT Office for additional student membership
information.

73,
This week's ANS Editor,
Lee McLamb, KU4OS

49. Using the pcsats

Newsgroup: rec.radio.amateur.space
Date: 2012-03-19 12:36:53 UTC
From: Codenut <becka@eastlink.ca>
Message-ID: <jk7997$9ua$1@speranza.aioe.org>
Source record: 199

What do I need for equipment to work the PCsats.

I am working on an SSB downlink currently on 70cm.

Cheers,

Alan
VY2WU

50. Weekly Highlights of Solar and Geomagnetic Activity, 12 - 18 March 2012

Newsgroup: rec.radio.amateur.space
Date: 2012-03-19 15:30:06 UTC
From: SWPC.Webmaster@noaa.gov
Message-ID: <20120319153001.1A88B33C6F@panix2.panix.com>
Source record: 200
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.dx,rec.radio.amateur.space,rec.radio.shortwave,rec.radio.info

```
:Product: Weekly Highlights and Forecasts
:Issued: 2012 Mar 19 1253 UTC
# Prepared by the US Dept. of Commerce, NOAA, Space Weather Prediction Center
# Product description and SWPC contact on the Web
# http://www.swpc.noaa.gov/weekly.html
#
# Weekly Highlights and Forecasts
#
Highlights of Solar and Geomagnetic Activity
12 - 18 March 2012

Solar activity was at low to high levels during the period. Region
1429 (N17, L = 299, class/area Dkc/1270 on 07 March) produced the
largest event of the period, an M7/1b x-ray flare at 13/1741 UTC.
Associated with this event, were a 1400 sfu Tenflare, a Type II and
a Type IV radio sweep, with an estimated shock velocity of 1366
km/s, and finally an asymmetric full-halo CME, visible in both LASCO
C2 and C3 imagery. Plane-of-sky speed, as measured from LASCO
imagery was 1375 km/s. The CME associated with this event was
forecast to become geoeffective. As Region 1429 approached the west
limb, finally rotating off on 16 March, Region 1432 (N14, L = 223,
class/area Esi/100 on 15 March) became active and produced two
M-class events. The largest was an M2/1n x-ray event at 14/1521 UTC.
A faint CME, visible in LASCO C2 imagery, was observed with a
plane-of-sky speed of 392 km/s. On 15 March, a second M-class event,
an M1/1f x-ray event at 15/0752 UTC, was also observed. A Type II
radio sweep with an estimated shock velocity of 468 km/s was
associated with this event. Both CME&rsquo;s associated with the
solar flares from Region 1432 were expected to arrive at Earth, but
with such slow speeds and a coronal hole high speed stream (CH HSS)
preceding them, very little effects were forecast. Finally, Region
1434 (S22, L = 205, class/area on 11 March) produced an M1/Sf x-ray
event at 17/2039 UTC. Another Type II radio sweep with an estimated
shock velocity of 1140 km/s was associated with this event. However,
the associated CME with this event was not expected to become
geoeffective. Aside from the M-class x-ray events, multiple C-class
events were observed during the period. Many of the solar regions
remained active as they evolved around the disk, but Region 1435
(S25, L = 220, class/area Dao/150 on 18 March) showed rapid growth
towards the end of the summary period.

Two separate greater than 10 MeV proton events were observed during
the summary period. The period began with the greater than 10 MeV
proton flux above the 10 pfu threshold. This event was associated
```

with the X5/3b x-ray flare observed on 07/0024 UTC. This event began on 07/0510 UTC, reached a maximum flux of 6530 pfu on 08/1115 UTC, and dropped below the 10 pfu threshold at 12/2050 UTC. The second event, began on 13 March and was associated the M7/1b x-ray event, mentioned earlier, from old Region 1429 (N18, L = 299). This greater than 10 MeV proton event began at 13/1810 UTC, reached a maximum flux of 469 pfu on 13/2045 UTC, and dropped below the 10 pfu threshold on 15/0620 UTC. A greater than 100 MeV proton event was also associated with the M7/1b x-ray event. This event began at 13/1810 UTC, reached a maximum flux of 1 pfu at 13/1905 UTC, and dropped below the 1 pfu threshold at 13/2255 UTC.

The greater than 2 MeV electron flux at geosynchronous orbit was at moderate to high levels for the entire summary period.

The geomagnetic field ranged from quiet to major storm periods with isolated severe storm periods observed at high latitudes. The summary period began at quiet levels, however midday on 12 March, a shock was observed by the ACE spacecraft with a Sudden Impulse of 96 nT, later observed by the Boulder magnetometer. This activity was due to the arrival of a CME associated with the 10 March M8 x-ray event from Region 1429. Measurements by the ACE spacecraft showed the solar wind speed increased from around 450 km/s to 775 km/s. The Interplanetary Magnetic Field (IMF) also increased from around 6 nT to 28 nT. As the effects of the CME continued, periods of major storms were observed with isolated sever storm levels at high latitudes from 12/0900-1500 UTC. From 13-14 March, quiet to active levels were recorded as effects from this CME event waned. On 15 March, another CME arrival was observed with another shock recorded by the ACE spacecraft, followed by a Sudden Impulse of 27 nT measured at the Boulder magnetometer. Solar wind measurements, as recorded by the ACE spacecraft, showed wind speeds around 800 km/s following the shock. Once again, quiet to major storms were observed at mid latitudes with isolated periods at sever storm levels at high latitudes. For the remainder of the summary period, 16-18 March, solar wind speeds remained elevated, well above 500 km/s, in response to a CH HSS behind the CME arrival on 15 March. The combined effects of the CME and CH HSS produced quiet to active levels at mid latitudes with continued minor to major storm periods observed at high latitudes.

Forecast of Solar and Geomagnetic Activity
19 March - 14 April 2012

Solar activity is expected to remain at low levels from 19 -26 March. On March 27, and then March 28, old Region 1430 (N22, L = 318) and Region 1429 (N18, L = 299) are expected to return, respectively. Even though these regions are on the far side of the solar disk, imagery supports that they are still active and producing CMEs. An increase to low to moderate levels is expected from 28 March - 11 April as both regions populate to front side of

the solar disk. A return to predominantly low levels is expected to prevail for the remainder of the forecast period.

No proton events are forecast from 19 - 29 March. An increase to a slight chance for proton events is forecast from 30 March - 11 April as old Region 1429 populates the visible disk. A return to background proton flux levels is expected from 12 April - 14 April.

Electrons, greater than 2 MeV, are expected to be at high levels from 18-25 March. A decrease to normal to moderate levels is expected from 26 - 28 March. From 29 March - 03 April, a return to moderate to high levels is forecast. From 04 April, through the end of the forecast period, 14 April, a return to normal to moderate levels is expected.

The geomagnetic field is expected to be at quiet to active levels on 19-20 March, in response to the arrival and lingering effects of a CME. Predominantly quiet levels are expected to prevail from 21-27 March. On 28 - 31 March, a CH HSS is expected to become geoeffective with quiet to active conditions expected. Quiet conditions are expected from 01 - 02 April. From 03 - 04 April, quiet to unsettled conditions are expected as another CH HSS moves into a geoeffective position. Predominantly quiet levels are expected to continue from 05 - 12 April. From 13-14 April, a CH HSS is expected to become geoeffective.

51. WSR-083 AMSAT Weekly Satellite Report

Newsgroup: rec.radio.amateur.space
Date: 2012-03-24 23:33:08 UTC
From: JoAnne Maenpaa <k9jkm@comcast.net>
Message-ID: <001601cd0a16$7174ca10$545e5e30$@net>
Source record: 101
Cross-posted to: rec.radio.amateur.space,rec.radio.info

```
This report is organized into three (3) parts.
Part 1 (S1) - operational analog amateur satellites
Part 2 (S2) - operational digital amateur satellites
Part 3 (S3) - non - operational satellites

SB SAT @ AMSAT W8ISS $WSR-083.S1
WSR 083 Part 1 03/23/2012

AMSAT NEWS SERVICE BULLETIN 083.S1
FROM AMSAT HQ SILVER SPRING, MD, March 23, 2012
TO ALL RADIO AMATEURS
BID: $WSR-083.S1

PW-Sat
Catalog Number:
Launch Date: February 13, 2012
Launch Site: Kourou, French Guiana

Status: On Orbit

Uplink: 435.020 MHz FM
Downlink: 145.900 MHz DSB

Beacon:

Callsign:

URL:
```

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum2
[03162012]
��DO-64 Delfi-C3
Catalog number: 32789
Launch Date: April 28, 2008 0354z
Launch site: Satish Dhawan Space Centre, India

```
Status: Operational
Current Mode: Science Mode - Beacon ONLY

Telemetry: 145.870 MHz

Downlink: 145.880 to 145.920 MHz
Uplink: 435.530 to 435.570 MHz

Delfi-C3 web page: http://www.delfic3.nl/
```

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnumh
[02092011]
��VO-52 HAMSAT
Catalog number: 28650
Launch Date: May 05, 2005 0444z
Launch site: Satish Dhawan Space Centre, India

Status: Operational
Current Mode: U/v - Dutch Transponder

Frequencies:
Indian Transponder:
Uplink: 435.220 to 435.280 MHz LSB/CW
Downlink: 145.930 to 145.870 MHz USB/CW

Dutch Transponder:
Uplink: 435.225 to 435.275 MHz LSB/CW
Downlink: 145.925 to 145.875 MHz USB/CW

Indian Beacon: 145.9360 MHZ CW
Dutch Beacon: 145.860 MHz 12WPM with CW message

Mode and Antenna Polarization:
V: LHCP
U: RHCP

Official Webpage: http://www.amsatindia.org/hamsat.htm

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum0

To know what transponder is switched on please listen for the beacon
that is active. Each transponder has a different beacon.
[03232012]
��SO-50 SAUDISAT-1C
Catalog number: 27607
Launch date: December 20, 2002 1700z
Launch site: Baikonur, Kazakhstan

Status: Operational

Current Mode: V/u

Uplink: 145.850 MHz FM - 67.0 Hz PL tone
Downlink: 436.795 MHz

Mode and Antenna Polarization:
V: Linear
U: Linear

Official Webpage: http://saudisat.kacst.edu.sa/index.shtml
(not up and running currently)

To switch the transmitter on, you need to send a CTCSS tone of 74.4 Hz. The order of operation is thus: (allow for Doppler as necessary):
1) Transmit on 145.850 MHz with a tone of 74.4 Hz to arm the 10 minute timer on board the spacecraft.
2) Now transmit on 145.850 MHz (FM Voice) using 67.0 Hz to PT the repeater on and off within the 10 Minute window.
3) Sending the 74.4 tone again within the 10 minute window will reset the 10 minute timer.
[02092011]
��FO-29 JAS-2
Catalog number: 24278
Launch Date: August 17, 1996

Status: Operational
Current Mode: V/u (Mode JA)

Voice/CW (Mode JA)
Uplink: 145.90 to 146.00 MHz CW/LSB
Downlink: 435.80 to 435.90 MHz CW/USB
Beacon: 435.795 MHz

Digital Mode JD
Uplinks: 145.850 MHz FM
145.870 MHz FM
145.910 MHz FM
Downlink: 435.910 MHz 1200-baud BPSK or 9600-baud FSK
Callsign: 8J1JCS
Digitalker: 435.910 MHz

Mode and Antenna Polarization:
V: RHCP
U: RHCP

For current operational schedule for FO-29:
http://www.ne.jp/asahi/m-arai/gkz/satinfo/fo29e.htm

JARL English webpage:
http://www.jarl.or.jp/English/5_Fuji/ejasmenu.htm

AMSAT-NA Webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID
�retURL�atellites/status.php

Mineo Wakita, JE9PEL, has created a simple decoder program for FO29's CW telemetry downlink: http://www.ne.jp/asahi/hamradio/je9pel/fo29cwts.htm
[01122012]
��AO-27 AMRAD
Catalog number: 22825
Launch date: September 26, 1993 0140z
Launch site: Kourou, French Guiana

Status: Operational

Current Mode: V/u

Uplink: 145.850 MHz FM
Downlink: 436.797 MHz FM

Mode and Antenna Polarization:
V: Linear
U: Linear

Official Webpage: http://www.ao27.org
[02092011]
��AO-7 AMSAT OSCAR 7
Catalog number: 07530
Launch Date: November 15, 1974
Launch site: Vandenberg AFB, California, USA

Status: Operational

Current Mode: Alternating between Mode A and B every 24 hours

Uplink: 145.850 to 145.950 MHz CW/USB Mode A
432.125 to 432.175 MHz CW/LSB Mode B
Downlink: 29.400 to 29.500 MHz CW/USB Mode A (1W PEP)
145.975 to 145.925 MHz CW/USB Mode B (8W PEP)
145.975 to 145.925 MHz CW/USB Mode C (2W PEP)
Beacons: 29.502 MHz CW
145.972 MHz CW
435.100 MHz CW
2304.100 MHz CW

Official Webpage:
http://www.amsat.org/amsat-new/satellites/sat_summary/ao7.php

The AO-7 Logbook and Resource Website:
http://www.planetemily.com/ao7/
[02092011]
��INTERNATIONAL SPACE STATION (ISS) - ARISS
Catalog number: 25544
Launch date: November 20, 1998 0640z (ZARYA module)
Launch sites: Baikonur, Kazakhstan
Kourou, French Guiana
Uchinoura Space Center, Japan
Kennedy Space Center, Titusville, Florida, USA

Status: Operational

Current Active Modes: FM Repeater - OFF
Voice - V/v
BBS - OFF
2m APRS - ON
70cm Digi - ON
SSTV - OFF

Expedition 30 Crew (November 2011 - March 2012):
Commander: Dan Burbank KC5ZSX
Flight Engineer: Anton Shkaplerov
Flight Engineer: Anatoly Ivanishin
Flight Engineer: Oleg Kononenko RN3DX
Flight Engineer: Andr&#65533; Kuipers PI9ISS
Flight Engineer: Don Pettit KD5MDT

Available Modes and Frequencies:
Digital/APRS:
Worldwide 2m packet uplink: 145.825 MHz FM 1k2
Worldwide 2m packet downlink: 145.825 Mhz FM 1k2
Worldwide 70cm packet downlink: 437.550 Mhz FM 1k2
Worldwide 70cm packet downlink: 437.550 Mhz FM 1k2

Voice:
Region 1 voice uplink: 145.200 MHz FM
Region 2/3 voice uplink: 144.490 MHz FM
Worldwide downlink: 145.800 MHz FM

Crossband Repeater:
Repeater Uplinks: 1269.650 MHz FM
437.800 MHz FM
145.990 MHz FM - 67.0 PL (Kenwood)
Repeater Downlink: 145.800 MHz FM
437.800 MHz FM (Kenwood)

SSTV Robot 36:
Downlink: 145.800 MHz FM

Mode and Antenna Polarization:
V: Linear
U: Linear

Callsigns:
Belgian: OR4ISS
German: DP0ISS
Russian: RS0ISS
RZ3DZR
United States: NA1SS
2m Packet Mailbox: RS0ISS-11
2m Digipeater alias: ARISS
70cm Packet Mailbox: RS0ISS-1
70cm Digipeater callsign: RS0ISS
70cm Digipeater alias: ARISS

Official ARISS Webpage: http://www.rac.ca/ariss
ISS Fan Club Webpage: http://www.issfanclub.com
APRS tracking page: http://www.ariss.net/

ISS Daily Crew Schedule: http://spaceflight.nasa.gov/station/timelines
Remember that the crew operates on UTC time. Also, all of the time
line is NOT translated from Russian and posted.
[12262011]

NNNN
/EX

SB SAT @ AMSAT W8ISS $WSR-083.S2
WSR 083 Part 2 03/23/2012

AMSAT NEWS SERVICE BULLETIN 083.S2
FROM AMSAT HQ SILVER SPRING, MD, March 23, 2012
TO ALL RADIO AMATEURS
BID: $WSR-083.S2

XaTcobeo
Catalog Number: 38082
Launch Date: Febrauary 13, 2012
Launch Site: Kourou, French Guiana

Status: Operational

Uplink:
Downlink: 437.365 MHz FFSK with AX.25

Beacon:

Callsign:

URL:

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum5
[03162012]
��UniCubeSat
Catalog Number:
Launch Date: Febrauary 13, 2012
Launch Site: Kourou, French Guiana

Status: Operational

Uplink:
Downlink: 437.305 MHz 9k6 bps FSK

Beacon:

Callsign:

URL:

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum3
[03162012]
��Robusta
Catalog Number:
Launch Date: Febrauary 13, 2012
Launch Site: Kourou, French Guiana

Status: On Orbit

Uplink:
Downlink: 437.325 MHz 1k2 FM telemetry (data every 1 min, 20 sec. burst)

Beacon:

Callsign:

URL:

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum2
[02142012]
��MO-72 MaSat-1
Catalog Number: 38081
Launch Date: Febrauary 13, 2012
Launch Site: Kourou, French Guiana

Status: Operational

Uplink:
Downlink: 437.345 MHz GFSK 625/1250 bps
437.345 MHz CW

Beacon:

Callsign:

URL:

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum6
[03232012]
��Goliat
Catalog Number: 38085
Launch Date: Febrauary 13, 2012
Launch Site: Kourou, French Guiana

Status: Operational

Uplink:
Downlink: 437.485 MHz 1k2 AFSK

Beacon:

Callsign:

URL:

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum�
[03162012]
��E-Star
Catalog Number: 38079
Launch Date: Febrauary 13, 2012
Launch Site: Kourou, French Guiana

Status: On Orbit

Uplink:
Downlink: 437.445 MHz 1k2 bps AFSK

Beacon:

Callsign:

URL:

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum0
[03232012]
��ALMASat1
Catalog Number: 38078
Launch Date: Febrauary 13, 2012
Launch Site: Kourou, French Guiana

Status: On Orbit

Uplink:
Downlink: 437.465 MHz 1k2 bps FSK
2407.850 MHz

Beacon:

Callsign:

URL:

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum9
[02212012]
��RS-39 Chibis-M
Catalog Number: 37841
Launch Date: October 30, 2011 10:11:00 UTC
Launch site: Tyuratam (Baikonur Cosmodrome), Kazakhstan

Status: Operational

Uplink:
Downlink:

Beacon: 435.315 MHz CW
435.215 MHz CW

Callsign:

URL:

IARU coordination status page:
[01122012]
��JUNGU
Catalog Number: 37841
Launch Date: October 12, 2011 05:30:00 UTC

Launch site: Satish Dhawan Space Centre, India

Status: On Orbit

Uplink: 145.??? MHz 1k2 (mode?)
Downlink: 437.505 MHz 9k6 (mode?)

Beacon: 437.275 MHz 15 wpm (?) CW

Callsign:

URL: http://www.iitk.ac.in/me/jugnu/index.htm

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum0
[01122012]
��SRMSAT
Catalog Number: 37839
Launch Date: October 12, 2011 05:30:00 UTC
Launch site: Satish Dhawan Space Centre, India

Status: On Orbit

Uplink: 145.900 MHz 1k AX.25 (speed?)
Downlink: 437.500 MHz 2k4 AX.25

Beacon: 437.425 MHz 12 wpm CW

Callsign:

URL: http://srmsat.in/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum1
[01122012]
��HRBE (E1P Explorer 1 [Prime] CubeSat (E1P-U2))
Catalog Number: 37855
Launch Date: October 28, 2011
Launch site: Vandenberg Air Force Base, California, USA

Status: On Orbit

Uplink: 437.305 MHz (???)
Downlink: 437.505 MHz AX.25 (SSB?)

Beacon:

Callsign:

URL: http://ssel.montana.edu/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum6
[01122012]
��M-Cubed

Catalog Number: 37855
Launch Date: October 28, 2011
Launch site: Vandenberg Air Force Base, California, USA

Status: On Orbit

Uplink:
Downlink: 437.485 MHz AX.25

Beacon:

Callsign:

URL: http://umcubed.org/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum!5
[01122012]
��RAX-2
Catalog Number: 37853
Launch Date: October 28, 2011
Launch site: Vandenberg Air Force Base, California, USA

Status: Operational

Uplink:
Downlink: 437.345MHz 9k6 GMSK

Beacon:

Callsign:

URL: http://rax.engin.umich.edu//

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum"1
[03232012]
��AO-71 AubieSat-1
Catalog Number: 37854
Launch Date: October 28, 2011
Launch site: Vandenberg Air Force Base, California, USA

Status: On Orbit

Uplink:
Downlink: 437.475 MHz 1k2 AX.25

Beacon: 437.475 MHz CW

Callsign: KI4NQO

URL: http://www.space.auburn.edu/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum8

[12262011]
��O/OREOS
Catalog Number: 37224
Launch Date: November 20, 2010
Launch site: Kodiak Launch Complex, Alaska, USA

Status: On Orbit

Uplink:
Downlink: 437.035 MHZ AX.25

Beacon:

Callsign:

URL: http://www.ooreos.org/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum6
[02092011]
��Rax-1 Radio Aurora Explorer
Catalog Number: 37223
Launch Date: November 20, 2010
Launch site: Kodiak Launch Complex, Alaska, USA

Status: On Orbit

Uplink:
Downlink: 437.505 MHz 9k6 GMSK

Beacon:

Callsign: RAX-1

URL: http://rax.engin.umich.edu/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum5
[02092011]
��FO-69 Fastrac-1 Sara Lily
Catalog Number: 37227
Launch Date: November 20, 2010
Launch site: Kodiak Launch Complex, Alaska, USA

Status: Operational

Uplink 1: 145.980 MHz 1k2 baud
Uplink 2: 145.825 MHz 1k2 baud
Downlink: 437.345 MHz 1k2 and 9k6 baud

Beacon: 437.435 MHz 1k2 AX.25

Callsign: Fast1

URL: http://fastrac.ae.utexas.edu/index.php

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=
[07052011]
==FO-70 Fastrac-2 Emma
Catalog Number: 37380
Launch Date: November 20, 2010
Launch site: Kodiak Launch Complex, Alaska, USA

Status: Operational

Uplink 1: 435.025 MHz 1k2 baud
Uplink 2: 437.435 MHz 9k6 baud
Downlink: 145.825 MHz 1k2 and 9k6 baud

Beacon: 145.825 MHz 1k2 AX.25

Callsign: Fast2

URL: http://fastrac.ae.utexas.edu/index.php

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=
[12162011]
==StudSat
Catalog Number: 36796
Launch Date: July 12, 2010 0352z
Launch site: Satish Dhawan Space Centre, India

Status: On Orbit

Uplink: 437.505MHz, 9600bps FSK
Downlink: 437.505MHz, 9600bps FSK
Beacon : 437.505MHz, 20bps ASK

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum4
[02092011]
==TIsat-1
Catalog Number: 36799
Launch Date: July 12, 2010 0352z
Launch site: Satish Dhawan Space Centre, India

Status: On orbit

Callsign: HB9DE

Uplink: 145.980MHz FM, AFSK
Downlink: 437.305MHz FM, AFSK
Beacon: 437.305MHz CW

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum8
[02092011]
==SwissCube
Catalog Number: 35932

Launch Date: September 23, 2009 0621z
Launch site: Satish Dhawan Space Centre, India

Status: Operational

Callsign: HB9EG

Beacon(100mw): 437.5050MHz CW
Beacon(1w): 437.5050MHz FSK 1k2bps

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum9
[02092011]
��UWE-2
Catalog Number: 35934
Launch Date: September 23, 2009 0621z
Launch site: Satish Dhawan Space Centre, India

Status: In Orbit

Beacon(500mw): 437.3850 MHz AFSK 1k2bps
437.3850 MHz FSK 9k6bps

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum0
[02092011]
��ITUpsAT1
Catalog Number: 35935
Launch Date: September 23, 2009 0621z
Launch site: Satish Dhawan Space Centre, India

Status: Operational

Beacon(100mw): 437.325MHz CW
Beacon(1w): 437.325MHz 19k2bps

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum3
[02092011]
��BEESAT
Catalog Number: 35933
Launch Date: September 23, 2009 0621z
Launch site: Satish Dhawan Space Centre, India

Status: Operational

Callsign: DP0BEE

Beacon(100mw): 436.000MHz CW
Beacon(500mw): 436.000MHz GMSK 4k8bps
Beacon(500mw): 436.000MHz GMSK 9k6bp
[02092011]
��CP-6
Catalog Number: 35004

Launch Date: May 19, 2009 2355z
Launch site: Wallops Island, Virginia, USA

Status: Operational

Downlink: 437.365 MHz 1k2 AFSK

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum1
[01122012]
��HAWKSAT 1
Catalog number: 35003
Launch Date: May 19, 2009 2355z
Launch site: Wallops Island, Virginia, USA

Status: operational

Downlink: 437.345 MHz ?

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum5
[01122012]
��Pharmasat
Catalog Number: 35002
Launch Date: May 19, 2009 2355z
Launch site: Wallops Island, Virginia, USA

Status: Operational

Downlink: 437.465 MHz 1k2 AFSK

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum�
[02092011]
��ANUSAT
Catalog Number: 34808
Launch Date: April 20, 2009 0115z
Launch Site: Satish Dhawan Space Centre, India

Status: ?

Downlink: 435.000 MHz
Uplink: 145.800 MHz

Telemetry: 137.400 MHz
[02092011]
��SOHLA-1 (ASTRO TECH.)
Catalog Number: 33496
Launch Date: January 23, 2009 0354z
Launch site: Tanegashima Space Center, Japan

Status: Operational

Proposed Frequencies and Modes:
Downlink: 437.505 MHz AFSK/CW
Beacon: 437.505 MHz AFSK/CW

Callsign:

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum1
[02092011]
��KAGAYAKI (Solan Co.)
Catalog Number: 33495
Launch Date: January 23, 2009 0354z
Launch site: Tanegashima Space Center, Japan

Status: In Orbit

Downlink: 437.375 MHZ FSK9k6/CW
Beacon: 437.375 MHz FSK9k6/CW

IARU coordination status page:

AMSAT-NA webpage:

[02092011]
��STARS (Kagawa Univ.) (Twin Satellites)
Catalog Number: 33498
Launch Date: January 23, 2009 0354z
Launch site: Tanegashima Space Center, Japan

Status: Operational ?

Downlinks: 437.485 MHz FM/CW
437.465 MHz FM/CW
Beacons: 437.305 MHz FM/CW
437.275 MHz FM/CW

Callsigns: JR5YBN
JR5YBO

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum�

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID1&retURL
�atellites/status.php
[02092011]
��KKS-1 (Tokyo MCIT)
Catalog Number: 33499
Launch Date: January 23, 2009 0354z
Launch site: Tanegashima Space Center, Japan

Status: Operational

Downlink: 437.455 MHz AFSK/CW
Beacon: 437.385 MHz AFSK/CW

Callsign: JQ1YYY

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum7

AMSAT-NA webapge:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID0&retURL
�atellites/status.php
[20092011]
��PRISM (Tokyo Univ.)
Catalog Number: 33493
Launch Date: January 23, 2009 0354z
Launch site: Tanegashima Space Center, Japan

Status: Operational ?

Downlink: 437.425 MHz AFSK/GMSK/CW
Beacon: 437.250 MHz AFSK/GMSK/CW

Callsign: JQ1YCX

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum�

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID9&retURL
�atellites/status.php
[02092011]
��RS-30 Radio Sputnik 30 (Yubileiny)
Catalog Number: 32953
Launch Date: May 23, 2008 1520z
Launch site: Plesetsk Missile and Space Complex, Russia

Status: Operational

Curent Modes: Telemetry
Audio
Images

Downlinks: 435.315 MHz
435.215 MHz

AMSAT-NA website:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID5&ret
URL�atellites/status.php

Official website:
http://www.npopm.com/?cid�oca&caidC
[02092011]
��CanX-2
Catalog number: 32790
Launch Date: April 28, 2008 0354z
Launch site: Satish Dhawan Space Centre, India

Status: Operational in range of ground station only

Downlink: 437.478 MHz GFSK

For the latest project status update please visit the Can X-2 web
page: http://www.utias-sfl.net/nanosatellites/CanX2/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnumF
[02092011]
��AAUSAT-II
Catalog number: 32788
Launch Date: April 28, 2008 0354z
Launch site: Satish Dhawan Space Centre, India

Status: Operational

Downlink: 437.425 MHz 1k2 baud packet

For the latest project status update please visit the AAUSAT-II web
page:
http://www.aausatii.aau.dk/homepage/index.php?language&page&me

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum`
[02092011]
��CO-65 CUTE-1.7+APD II
Catalog number: 32785
Launch Date: April 28, 2008 0354z
Launch site: Satish Dhawan Space Centre, India

Status: Operational

Downlink: 437.475 MHz 9k6 Packet
Uplink: 1267.600 Mhz

Telemetry Beacon:
Downlink: 437.2750 MHz CW

For the latest project status update please visit the Cute-1.7+APD II
web page: http://lss.mes.titech.ac.jp/ssp/cute1.7/index_e.html

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnumx

Command Station blog website:
http://lss.mes.titech.ac.jp/ssp/cute1.7/blog/

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID2&retURL
atellites/status.php
[03232012]
��Compass-1
Catalog number: 32787
Launch Date: April 28, 2008 0354z
Launch site: Satish Dhawan Space Centre, India

Status: Operational

Current Mode: dependant on last received command

Uplink: 145.980 MHz FM
Downlink: 437.275 Mhz CW
437.405 MHz Packet

For the latest project status update please visit the Compass 1 web
page: http://www.raumfahrt.fh-aachen.de/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnumR

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID4&retURL
=atellites/status.php
[06162011]
==CO-66 Seeds II
Catalog number:
Launch Date: April 28, 2008 0354z
Launch site: Satish Dhawan Space Centre, India

Status: Operational

Downlink: 437.485 MHz

Callsign: JQ1YGU

For the latest project status update please visit the Seeds 2 web
page: http://cubesat.aero.cst.nihon-u.ac.jp/english/seeds_2_e.html

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum6

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID3&retURL
=atellites/status.php
[02092011]
==CAPE-1
Catalog Number: 31130
Launch Date: April 17,2007 0702z
Launch site: Baikonur, Kazakhstan

Status: Intermittent

Current Mode: /u

TLM Downlink: 435.245 MHz 9600 bs FSK AX.25
CW Beacon: 435.245 MHz CW

Callsign: K5USL

TLM and CW interchange every 30 seconds.

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID&#65533;&retURL
/satellites/status.php

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnumr
[02092011]
&#65533;&#65533;CP3
Catalog Number: 31129
Launch Date: April 17,2007 0702z
Launch site: Baikonur, Kazakhstan

Status: Operational

Current Mode: /u

Downlink: 436.845 MHz 1200 bps AFSK AX.25

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnumt
[02092011]
&#65533;&#65533;CO-58 CubeSat XI-V
Catalog number: 28895
Launch Date: October 27, 2005 0652z
Launch site: Plesetsk Missile and Space Complex, Russia

Status: Operational - CW Beacon only

Current Mode: /u

Telemetry Downlink: 437.4250 MHz AFSK 1200bps using AFK protocol
Beacon: 437.2750 MHz CW

Callsign: JQ1YGW

Official Webpage: http://www.space.t.u-tokyo.ac.jp/cubesat/mission/V/

Pictures received by Mineo Wakita - JE9PEL:
http://www.ne.jp/asahi/hamradio/je9pel/xivpicte.htm

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum7
[02092011]
&#65533;&#65533;CO-57 CubeSat XI-IV
Catalog number: 27848
Launch date: June 30, 2003 1415z
Launch site: Plesetsk Missile and Space Complex, Russia

Status: ?????

Current Mode: /u

Beacon: 436.8475 MHz CW
Telemetry : 437.4900 MHz AFSK 1200 BPS

Callsign: JQ1YGW

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID&#65533;&retURL
&#65533;atellites/status.php

Official Webpage: http://www.space.t.u-tokyo.ac.jp/cubesat/mission/V/
[02092011]
&#65533;&#65533;QuakeSat
Catalog Number: 27845
Launch Date: June 30, 2003 1415z
Launch site: Plesetsk Missile and Space Complex, Russia

Status: Telemetry only

Current Mode: 9600 baud data packet

Mode U packet
Downlink: 436.675 MHz 9k6 BPS

Quakesat webpage:
http://www.quakefinder.com/services/quakesat-ssite/
[02252011]
&#65533;&#65533;CO-55 Cute-1.7+APD II
Catalog Number: 27844
Launch date: June 30, 2003 1415z
Launch site: Plesetsk Missile and Space Complex, Russia

Status: Operational

Current Mode: CW downlink worldwide
AX25 Packet with uplink command over Japan only

Mode U Telemetry
Downlink: 437.4000 MHz AFSK 1200 BPS

Mode U TLM Beacon
Downlink: 436.8375 MHz CW

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satIDi&retURL
&#65533;atellites/status.php

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnumx
[02092011]
&#65533;&#65533;NO-44 PCSAT
Catalog number: 26931
Launch Date: September 30, 2001 0240z
Launch site: Kodiak Launch Complex, Alaska, USA

Status: Telemetry only

Current Mode: V/v

General Usage Uplink/Downlink: 145.827 MHz 1200 Baud
Special Usage Downlink: 144.390 Mhz 1200 Baud

PCSAT APRS page: http://pcsat.aprs.org

aprstlm Telemetry Decoder program:
http://www.xciv.org/~iain/aprstlm/v1.2/
[02092011]
��RS-22 RADIO SPORT 22 (MOZHAYETS 4)
Catalog number: 27939
Launch Date: September 27, 2003 0612z
Launch site: Plesetsk Missile and Space Complex, Russia

Status: Operational - 70cm cw only

Current Mode: /u

CW Beacon - 435.352 MHz
145.818 MHz

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satIDv&retURL
�atellites/status.php
[02092011]
��LO-19 LUSAT
Catalog number: 20442
Launch date: January 22, 1990
Launch site: Kourou, French Guiana

Status: CW Beacon only

Uplinks: 145.840 MHz 1200-baud Manchester FSK
145.860 MHz 1200-baud Manchester FSK
145.880 MHz 1200-baud Manchester FSK
145.900 MHz 1200-baud Manchester FSK

CW downlink: 437.125 MHz

Digital downlink: 437.150 MHz SSB (RC-BPSK 1200-baud PSK)

Broadcast Callsign: LUSAT-11
BBS: LUSAT-12

General information and telemetry samples can be found at:
www.telecable.es/personales/ea1bcu
[02092011]
��UO-11 OSCAR-11
Catalog number: 14781
Launch Date: March 1, 1984
Launch site: Vandenburg AFB, California, USA

Status: Operational ?

Current Mode: /v

Telemetry Downlink: 145.825 MHz FM 1200 AFSK
UHFBeacon: 435.025 MHz
Mode-S Beacon: 2401.500 MHz

Mode and Antenna Polarization:
V: RHCP
S: LHCP

Webpage: http://www.users.zetnet.co.uk/clivew/
MPEG3 files: http://www.ne.jp/asahi/hamradio/je9pel/uo11tlme.htm
[07052011]
��INTERNATIONAL SPACE STATION (ISS) - ARISS
Catalog number: 25544
Launch date: November 20, 1998 0640z (ZARYA module)
Launch sites: Baikonur, Kazakhstan
Kourou, French Guiana
Uchinoura Space Center, Japan
Kennedy Space Center, Titusville, Florida, USA

Status: Operational

Current Active Modes: FM Repeater - OFF
Voice - V/v
BBS - OFF
2m APRS - ON
70cm Digi - ON
SSTV - OFF

Expedition 30 Crew (November 2011 - April 2012):
Commander: Dan Burbank KC5ZSX
Flight Engineer: Anton Shkaplerov
Flight Engineer: Anatoly Ivanishin
Flight Engineer: Oleg Kononenko RN3DX
Flight Engineer: Andr� Kuipers PI9ISS
Flight Engineer: Don Pettit KD5MDT

Available Modes and Frequencies:
Digital/APRS:
Worldwide 2m packet uplink: 145.825 MHz FM 1k2
Worldwide 2m packet downlink: 145.825 Mhz FM 1k2
Worldwide 70cm packet downlink: 437.550 Mhz FM 1k2
Worldwide 70cm packet downlink: 437.550 Mhz FM 1k2

Voice:
Region 1 voice uplink: 145.200 MHz FM
Region 2/3 voice uplink: 144.490 MHz FM
Worldwide downlink: 145.800 MHz FM

Crossband Repeater:
Repeater Uplinks: 1269.650 MHz FM
437.800 MHz FM
145.990 MHz FM - 67.0 PL (Kenwood)
Repeater Downlink: 145.800 MHz FM
437.800 MHz FM (Kenwood)

SSTV Robot 36:
Downlink: 145.800 MHz FM

Mode and Antenna Polarization:
V: Linear
U: Linear

Callsigns:
Belgian: OR4ISS
German: DP0ISS
Russian: RS0ISS
RZ3DZR
United States: NA1SS
2m Packet Mailbox: RS0ISS-11
2m Digipeater alias: ARISS
70cm Packet Mailbox: RS0ISS-1
70cm Digipeater callsign: RS0ISS
70cm Digipeater alias: ARISS

Official ARISS Webpage: http://www.rac.ca/ariss
ISS Fan Club Webpage: http://www.issfanclub.com
APRS tracking page: http://www.ariss.net/

ISS Daily Crew Schedule: http://spaceflight.nasa.gov/station/timelines
Remember that the crew operates on UTC time. Also, all of the time
line is NOT translated from Russian and posted.
[12262011]
NNNN
/EX

SB SAT @ AMSAT W8ISS $WSR-083.S3
WSR 083 Part 3 03/23/2012

AMSAT NEWS SERVICE BULLETIN 083.S3
FROM AMSAT HQ SILVER SPRING, MD, March 23, 2012
TO ALL RADIO AMATEURS
BID: $WSR-083.S3

THE FOLLOWING ARE IN ORBIT BUT ARE NON-OPERATIONAL AT THIS TIME:

NANOSAIL-D
Catalog Number: 37361(?)
Ejection Date: January 17, 2011

Status: On orbit

Downlink: 437.270 MHz AX.25

URL: http://nanosaild.engr.scu.edu/dashboard.htm

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum5
[01052012]
��HO-68 HOPE-1 (CAS-1)(XW-1)
Catalog Number: 36122
Launch Date: December 15, 2009 0231z
Launch site: Taiyuan Space Center, PRC

Status: Non - Operational

Callsign:
Broadcast: BJ1SA-11
BBS: BJ1SA-12

Uplinks: 145.8250 MHz FM, PL 67.0 Hz.
145.9250 - 145.9750 MHz SSB/CW
145.8250 MHz AFSK 1200 BPS
Downlinks: 435.6750 MHz FM
435.7650 - 435.7150 MHz SSB/CW
435.6750 MHz AFSK 1200 BPS

Beacon: 435.7900 MHz CW

Mode and Antenna Polarization:
V: LHCP 2.0dBi max
U: RHCP 3.0dBi max

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum8

For more information about XW-1 (CAS-1):
http://
[01122012]
��SO-67 SumbandilaSat
Catalog Number: 35870
Launch Date: September 17, 2009 1555z
Launch site: Baikonur, Kazakhstan

Status: Non - Operational

Callsign: ZS0SUM

Uplink: 145.875MHz FM tone 233.6 Hz
Downlink: 435.345MHz FM

Mode and Antenna Polarization:
V: Linear
U: Linear

For more information about SO-67:
http://www.amsatsa.org.za/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum�
[01272012]
��CP4
Catalog Number: 31132
Launch Date: April 17, 2007

Status: Non-Operational

Current Mode: /u

TLM Downlink: 437.325 MHz 1200 bps FSK AX.25
CW Beacon: 437.325 MHz CW

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnumy
[09062010]
��LIBERTAD-1
Catalog Number: 31128
Launch Date: April 17, 2007

Status: Non-Operational

Current Mode: V/u APRS Packet ax25

Callsign: 5K3L

Uplink: 145.825 MHz 1200 AFSK ax25 APRS
Downlink: 437.399 MHz 1200 AFSK ax25 APRS

Telemetry Beacon: 437.4050 MHz 1200 AFSK ax25

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnumv
[09062010]
��PO-63 PEHUENSAT-1
Catalog Number: 29712
Launch Date: January 10, 2007

Status: Non-Operational

Current Mode: V/v

Uplink/Downlink: 145.825 Mhz FM
Voice Recorder: 145.825 Mhz FM

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnumQ
[09062010]
��NCUBE-2
Catalog number: 28897
Launch Date: October 27, 2005

Status: Still attached to XO-53 (SSETI)?

Proposed Callsign: TBA
Proposed Transmit Frequency: 437.305
2407.250

Official Website: http://www.ncube.no

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum$
[09062010]
��XO-53 SSETI
Catalog number: 28894

Launch Date: October 27, 2005

Status: Non-operational

Voice Uplink: 437.250 MHz FM 67Hz CTCSS
Voice Downlink: 2401.835 MHz FM
Packet Up/Downlink: 437.250 MHz 9k6 packet
Packet Downlink 2401.835 MHz 38k4 packet

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnumT
[09062010]
��UWE-1
Catalog Number: 28892
Launch Date: October 27, 2005

Status: Non-Operational

Mode U Telemetry
Downlink: 437.5050 MHz 9600 AFSK

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnumS
[09062010]
��AO-51 ECHO
Catalog number: 28375
Launch date: June 29, 2004 0745z
Launch site: Baikonur, Kazakhstan

Status: Non - Operational

Current Mode(s):
Voice repeater: V/u
Uplink: 145.880 MHz FM
Downlink: 435.150 MHz FM

Telemetry: Recovery efforts
Downlink: 435.150MHz 9k6

Analog voice downlink: 435.300 MHz FM
435.150 MHz FM
2401.200 Mhz FM
Analog voice uplink: 145.860 MHZ FM
145.880 MHz USB
145.880 MHz FM
145.920 MHz FM
145.920 MHz FM - 67 Hz PL tone burst
1268.705 MHz FM
Digital Downlinks: 435.150 MHz FM 38k4 PBP, 1 watt output
435.150 MHz FM 9k6 Pacsat Broadcast Protocol
2401.200 MHz FM 38k4 bps, AX.25
Digital Uplink: 145.860 MHz FM 9k6 Pacsat Broadcast Protocol
1268.703 mhz FM 9k6 Pacsat Broadcast Protocol

Beacon: 435.150 MHz

Mode and Antenna Polarization:
T: Linear
V: Linear
U: TX A (usually digital)LHCP
TX B (usually analog) RHCP
L: Linear
S: Linear

Broadcast: PECHO-11
BBS: PECHO-12

Official Webpage: http://www.amsat.org/amsat-new/echo/CTNews.php

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum
[12062011]
��CANX-1
Catalog Number: 27847
Launch Date: June 30, 2003

Status: Non-Operational

Downlink: 437.8800 MHz AFSK 1k2bps
[06052009]
��DTUSAT
Catalog Number: 27842
Launch Date: June 30, 2003

Status: Non-Operational

Current Mode: 2k4 AFSK Packet last reported

Downlink: 437.475MHz

Officail webpage: http://dtusat1.dtusat.dtu.dk/

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID1&retURL
�tellites/all_oscars.php
[02212009]
��AO-49 AATiS OSCAR-49 (SAFIR-M)
Catalog number: 27605
Launch Date: December 20, 2002

Status: Non-operational.

Uplink: 435.275 MHz 1200-baud AFSK
Downlink: 145.825 MHz 9600-baud FSK
(optional voice message)

Broadcast callsign: DP0AIS

Official webpage: http://amend.gmxhome.de
[01222007]
��MO-46 TIUNGSAT-1
Catalog number: 26548
Launch date: September 26, 2000

Status: Telemetry only

Uplinks: 145.850 MHz
145.925 MHz 9600-baud FSK
Downlink: 437.325 MHz

Broadcast callsign: MYSAT3-11
BBS: MYSAT3-12

TiungSat-1 is Malaysia's first micro-satellite and in addition to
commercial land and weather imaging payloads offers FM and FSK
Amateur Radio communication.

TiungSat-1, named after the mynah bird of Malaysia, was developed as
a collaborative effort between the Malaysian government and Surrey
Satellite Technology Ltd.
[03302009]
��NO-45 SAPPHIRE
Catalog number: 26932
Launch Date: September 30, 2001

Status: Non-Operational

Downlink: 437.095 MHz 1200 baud AX-25 AFSK
Uplink: 145.945 MHz UI Digipeater
Digi Callsign: KE6QMD

Everyone is welcome to use the digipeating/APRS features of Sapphire,
as per the user service agreement located at the following URL:
http://web.usna.navy.mil/~bruninga/pcsat/contract.txt
[03132005]
��SO-42 SAUDISAT-1B
Catalog number: 26549
Launch date: September 26, 2000

Status: Non-Operational

Downlink: 437.075 MHz

Broadcast Callsign: SASAT2-11
BBS: SASAT2-12

Further information is available at:
http://www.amsat.org/amsat/sats/n7hpr/so42.html
[01222007]
��SO-41 SAUDISAT-1A
Catalog number: 26545
Launch Date: September 26, 2000

Status: Non-Operational

Uplink: 145.850 MHz
Downlink: 436.775 MHz

Broadcast Callsign: SASAT1-11
BBS: SASAT1-12

Further information is available at:
http://www.amsat.org/amsat/sats/n7hpr/so41.html
[01222007]
��AO-40 AMSAT OSCAR 40
Catalog number: 26609
Launch Date: November 16, 2000

Status: Non-Operational

Uplinks

V-band: 145.840 - 145.990 MHz CW/LSB
U-band: 435.550 - 435.800 MHz CW/LSB
L1-band: 1269.250 - 1269.500 MHz CW/LSB
L2-band: 1268.325 - 1268.575 MHz CW/LSB

Downlinks

S2-band: 2401.225 - 2401.475 MHz CW/USB
K-band: 24048.010 - 24048.060 MHz CW/USB
Beacon: 2401.323 MHz
24048.035 MHz

P3-D Telemetry Beacons (IHU)

BEACON General Beacon(GB) Middle Beacon(MB) Engineering Beacon(EB)
2 m none 145.898 MHz none
70cm 435.438 MHz 435.588 MHz 435.838 MHz
13cm(1) 2400.188 MHz 2400.338 MHz 2400.588 MHz
13cm(2) 2401.173 MHz 2401.323 MHz 2401.573 MHz
3cm 10450.975 MHz 10451.125 MHz 10451.375 MHz
1.5cm 24047.885 MHz 24048.035 MHz 24048.285 MHz
[07162007]
��OO-38 OPAL
Catalog Number: 26063
Launch Date: January 27, 2000

Status: Non-Operational

Mode U TLM Beacon
Downlink: 437.1000 MHz 9600 FSK
[08132007]
��UO-36 UoSAT-12
Catalog number: 25693
Launch date: April 21, 1999

Status: Unknown

Uplink: 145.960 MHz (9600-baud FSK)
Downlinks: 437.025 MHz
437.400 MHz

Broadcast Callsign: UO121-11
BBS: UO121-12

The VK5HI viewer shareware for UO-36 is available on the AMSAT-NA web
site at the following URL:
ftp://ftp.amsat.org/amsat/software/win32/display/ccddsp97-119.zip
[01222007]
��SO-35 SUNSAT
Catalog Number: 25636
Launch date:February 23, 1999

Status: Non-Operational

Downlink: Mode B Repeater: 436.291 MHz
Mode J Digipeater: 436.250 MHz

Uplinks: Mode B Repeater: 145.825 MHz
Mode J Digipeater: 145.825 MHz
145.900 MHz

For more information of SUNSAT vist the satellite web site:
http://esl.ee.sun.ac.za/projects/sunsat/
[01222007]
��PO-34 PANSAT
Catalog number: 25520
Launch date: October 30, 1998

Status: Telemetry downloads only

Uplink/downlink: 436.500 MHz

Official Webpage: http://www.sp.nps.navy.mil/pansat/
[05092004]
��SO-33 SEDSAT-1
Catalog number: 25509
Launch date: October 24, 1998

Status: Semi-operational

Downlink: 437.910 MHz FM (9600-baud FSK)

The satellite is not currently available for uplink transmissions and
the image and transponder recovery efforts have been unsuccessful.

For more information on SedSat-1 visit the satellite web site:
http://seds.uah.edu/projects/sedsat/sedsat.htm
[09042006]
��GO-32 Gurwin TechSat-1B
Catalog number: 25397

Launch Date: July 10, 1998

Status: Non-Operational

Current Modes:
Telemetry : /u

Downlink: 435.225 MHz FM (9600-baud FSK)
435.325 Mhz - Not Available - temperature problems
Uplinks: 145.850 FM
145.890 FM
145.930 FM
1269.700 FM
1269.800 FM
1269.900 FM

Broadcast Callsign: 4XTECH-11
BBS Callsign: 4XTECH-12

More information of GO-32 can be found at:
http://asri.technion.ac.il/techsat/

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID&retURL
�atellites/status.php
[07172010]
��TO-31 TMSAT-1
Catalog number: 25396
Launch Date: July 10, 1998

Status: Non-operational

Uplink: 145.925 MHz 9600 baud FSK
Downlink: 436.925 MHz 9600 baud FSK

Broadcast callsign: TMSAT1-11
BBS: TMSAT1-12
[05012006]
��MO-30 UNAMSAT-2
Catalog Number: 24305
Launch Date: September 5, 1996

Status: Non-operational

Downlink: 435.1380 MHz AFSK 1200 BPS
Downlink: 435.2060 MHz AFSK 1200 BPS
Uplink: 145.8150 MHz AFSK 1200 BPS
Uplink: 145.8350 MHz AFSK 1200 BPS
Uplink: 145.8550 MHz AFSK 1200 BPS
Uplink: 145.8750 MHz AFSK 1200 BPS
[06042009]
��PO-28 POSAT-1
Catalog number: 22829

Launch Date: September 25, 1993

Status: Non-operational

Downlink: 429.950
Uplink: Not until handover back to Amatuer usage

Broadcast callsign: POSAT1-11
BBS callsign: POSAT1-12

AMSAT Webpage: http://www.amsat.org/amsat/sats/n7hpr/po28.html
POSAT-1 webpage:
http://www.ee.surrey.ac.uk/SSC/CSER/UOSAT/missions/posat1.html
[01012009]
��IO-26 ITAMSAT
Catalog number: 22826
Launch Date: September 26, 1993

Status: PSK carrier only

Current Mode:

Uplinks: 145.875 MHz FM 1200-baud
145.900 MHz FM 1200-baud
145.925 MHz FM 1200-baud
145.950 MHz FM 1200-baud

Downlink: 435.808 MHz PSK

Broadcast Callsign: ITMSAT-11
BBS: ITMSAT-12

Official webpage: http://www.itamsat.org
AMSAT Webpage: http://www.amsat.org/amsat/sats/n7hpr/io26.html
[01212007]
��KO-25 KITSAT
Catalog number: 22828
Launch date: September 26, 1993

Status: Non-operational

Uplink: 145.980 MHz FM 9600-baud FSK
Downlink: 436.500 MHz FM

Broadcast Callsign: HL02-11
BBS: HL02-12
[05092004]
��AO-24 ARSENE
Catalog Number: 22654
Launch Date: May 13, 1993

Status: Non-operational

Uplink: 435.0625 MHz FM 1k2bps AFSK
435.1125 MHz FM 1k2bps AFSK
435.1375 MHz FM 1k2bps AFSK
Downlink: 145.9750 MHz FM 1k2bps AFSK
2446.5025 MHz FM 1k2bps AFSK

Beacon: 2446.4700 MHz CW

Broadcast callsign:
BBS:
[12162009]
��KO-23 KITSAT
Catalog number: 22077
Launch date: August 10, 1992

Status: Non-operational

Uplink: 145.900 MHz FM (9600-baud FSK)
Downlink: 435.170 MHz FM

Broadcast Callsign: HLO1-11
BBS: HLO1-12
[01222007]
��UO-22 UOSAT
Catalog number: 21575
Launch date: July 17, 1991

Status: Non-Operational

Uplink: 145.900 FM 9600-baud FSK
Downlink: 435.120 MHz FM

Broadcast Callsign: UOSAT5-11
BBS: UOSAT5-12
[01222007]
��AO-21 AMSAT-OSCAR 21
Catalog Number: 21087
Launch Date: January 29, 1991

Status: Non-Operational

Uplink: 435.041 MHz FM DSP
Downlink: 145.983 MHz FM DSP
[01222007]
��FO-20 JAS-1b
Catalog number: 20480
Launch Date: February 07, 1990

Status: Non-Operational

Beacons: 435.795 MHz CW
435.910 MHz AX25

Voice Transponder:
Uplink: 145.900 to 146.000 MHz CW/LSB

Downlink: 435.800 to 435.900 MHz CW/USB

Digital Transponder:
Uplinks: 145.850 MHz
145.870 MHz
145.890 MHz
145.910 MHz
Downlink: 435.910 MHz

More FO-20 info can be found at:
http://www.amsat.org/amsat/sats/n7hpr/fo20.html
[01152007]
��WO-18 WEBERSAT
Catalog Number: 20441
Launch Date: January 22, 1990

Status: Non-Operational

Downlink: 437.104 MHz SSB 1200 Baud PSK AX.25
[05012006]
��DO-17 Dove
Catalog Number: 20440
Launch Date: January 22, 1990

Status: Non-operational.

Downlink: 145.825 MHz FM 1200 Baud AFSK
Beacon: 2401.220 MHz
[05012006]
��AO-16 PACSAT
Catalog number: 20439
Launch Date: January 22, 1990

Status: non-operational

Current Mode: V/u

Uplink: 145.900 MHz FM 1200-baud Manchester FSK (reserved)
145.920 MHz FM VOICE
145.940 MHz FM 1200-baud Manchester FSK (reserved)
145.960 MHz FM 1200-baud Manchester FSK (reserved)

Downlink: 437.026 MHz USB VOICE
(1200-baud PSK - MBL Telemetry Only)

Mode-S Beacon: 2401.1428 MHz [NO FUTURE OPERATIONS PLANNED]

Mode and Antenna Polarization:
U: RC 437.050 MHz RHCP
PSK 437.026 MHz LHCP
V: Linear

Broadcast Callsign: PACSAT-11
BBS: PACSAT-12

AO-16 AMSAT Webpage: http://www.amsat.org/amsat/sats/n7hpr/ao16.html
[07242009]
��UO-15 UoSAT-4
Catalog Number: 20438
Launch Date: January 22, 1990

Status: Non-operational

Uplink: ?
Downlink: 435.1250MHz (?)
435.1200MHz (?)
[06042009]
��UO-14 UoSAT-3
Catalog number: 20437
Launch date: January 22, 1990

Status: Non-operational

Uplink: 145.975 MHz FM
Downlink: 435.070 MHz FM
[05092004]
��FO-12 Fuji-OSCAR 12
Catalog Number: 16909
Launch Date: August 12, 1986

Status: Non-Operational

Mode V/U (J) Linear Transponder (Inverting):
Uplink: 145.9000 - 146.0000 MHz SSB/CW
Downlink 435.8000 - 435.9000 MHz SSB/CW

Mode V/U (J) Packet:
Uplink: 145.8500 MHz MFSK 1200 BPS
Uplink: 145.8700 MHz MFSK 1200 BPS
Uplink: 145.8900 MHz MFSK 1200 BPS
Uplink: 145.9100 MHz MFSK 1200 BPS

Downlink 435.9100 MHz PSK 1200 BPS

Telemetry Beacon: 435.7950 MHz SSB/CW
[01152007]
��AO-10 OSCAR 10
Catalog number: 14129
Launch Date: June 16, 1983

Status: Non-operational

Uplink: 435.030 to 435.180 MHz CW/LSB
Downlink: 145.975 to 145.825 MHz CW/USB

Beacon: 145.810 MHz (unmodulated carrier)

W4SM has more information about the satellite at the following URL:
http://www.cstone.net/~w4sm/AO-10.html
[05092004]

��AO-8 AMSAT-OSCAR 8
Catalog Number: 10703
Launch Date: March 3, 1978

Status: Non-Operational

Mode V/U (J) Linear Transponder (Non-Inverting): Non-Operational
Uplink: 145.9000 - 146.0000 MHz SSB/CW
Downlink 435.1990 - 435.2000 MHz SSB/CW

Mode V/U (J) TLM Beacon: Non-Operational
Downlink 435.0950 MHz CW

Mode V/A (A) Linear Transponder (Non-Inverting): Non-Operational
Uplink: 145.8500 - 145.9000 MHz SSB/CW
Downlink 29.4000 - 29.5000 MHz SSB/CW

Mode V/A (A) TLM Beacon: Non-Operational
Downlink 29.4020 MHz CW
[01152007]
��AO-6 AMSAT-OSCAR 6
Catalog Number: 06236
Launch Date: October 15, 1972

Status: Non-Operational

Uplink: 145.9000 - 146.0000 MHz SSB/CW
Downlink: 29.4500 - 29.5500 MHz SSB/CW
Beacons: 29.450 MHz
435.100 MHz
[01312008]
��AO-5 Australis-OSCAR 5
Catalog Number: 04321
Launch Date: January 23, 1970

Status: Non-Operational

Telemetry Beacons: 144.0500 MHz CW
29.4500 MHz CW
[01152007]
��OSCAR III
Catalog Number: 01293
Launch Date: March 09, 1965

Status: Non-Operational

Uplink: 145.9750 - 146.0250 MHz SSB/CW
Downlink: 144.3250 - 144.3750 MHz SSB/CW
[01012007]
��RS-15 RADIO SPORT RS-15
Catalog number: 23439
Launch Date: December 26, 1994

Status: Non-operational

Uplink: 145.858 to 145.898 MHz CW/USB
Downlink: 29.354 to 29.394 MHz CW/USB

Beacon 1: 29.352 MHz (intermittent)
Beacon 2: 29.398 MHz

SSB meeting frequency: 29.380 MHz (unofficial)
[06202004]
��RS-13 RADIO SPORT RS-13
Catalog number: 21089
Launch date: February 5, 1991

Status: Non-operational

Uplink: 21.260 to 21.300 MHz CW/USB
Downlink: 145.860 to 145.900 MHz CW/USB

Beacon: 145.860 MHz

Robot: 145.908 MHz
[05232004]
��RS-12 RADIO SPORT RS-12
Catalog number: 21089
Launch date: February 5, 1991

Status: Non-operational

Uplink: 21.210 to 21.250 MHz CW/USB
Downlink: 29.410 to 29.450 MHz CW/USB

Beacon: 29.408 MHz

Robot: 29.454 MHz
[05232004]
NNNN
/EX

ANS is released worldwide via the AMSAT ANS e-mail reflector and a live radiocast on the AMSAT-NA 20-meter net held each Sunday on 14.282 MHz. Pre-net operations start at 18:00 UTC, with current ANS bulletins transmitted to the eastern U.S. at 19:00 UTC and to the western U.S. at 19:30 UTC.

Information on AMSAT-NA is available at the following URL:
http://www.amsat.org

Mailing address:
AMSAT-NA
850 Sligo Avenue, Suite 600
Silver Spring, Maryland 20910-4703

Voice: 301-589-6062
888-322-6728
FAX: 301-608-3410

Currently, AMSAT-NA supports the following (free) mailing lists:

* AMSAT News Service (ANS)
* General satellite discussion (AMSAT-BB)
* Orbit data (KEPS)
* Manned space missions (SAREX)
* District of Columbia area (AMSAT-DC)
* New England area (AMSAT-NE)
* AMSAT Educational Liaison mailing list (AMSAT-EDU)
* AMSAT K-12 Educational Liaison mailing list (AMSAT-K12)

A daily digest version is available for each list.

To subscribe, or for more list information, visit the following URL:
http://www.amsat.org/mailman/listinfo/ans

In addition to regular membership, AMSAT-NA offers membership in the President's Club. Members of the President's Club, as sustaining donors to AMSAT Project Funds, will be eligible to receive additional benefits. Application forms are available from the AMSAT-NA Office.

This week's Weekly Satellite Report Editor is James French, W8ISS.

ANS is always dedicated to past ANS editor 'BJ' Arts, WT0N, and to the memory of longtime AMSAT supporters Werner Haas, DJ5KQ, Dennis Kitchen, G0FCL and John Branegan GM4IHJ.

Please send any amateur satellite news or reports to: ans-editor{at}
amsat.org
NNNN
/EX

52. ANS-085 AMSAT News Service Weekly Bulletins

Newsgroup: rec.radio.amateur.space
Date: 2012-03-26 14:37:54 UTC
From: JoAnne Maenpaa <k9jkm@comcast.net>
Message-ID: <000301cd0b5e$0142aa70$03c7ff50$@net>
Source record: 102
Cross-posted to: rec.radio.amateur.space,rec.radio.info

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AMSAT NEWS SERVICE
ANS-085

ANS is a free, weekly, news and information service of AMSAT North
America, The Radio Amateur Satellite Corporation. ANS reports on the
activities of a worldwide group of Amateur Radio operators who share an
active interest in designing, building, launching and communicating
through analog and digital Amateur Radio satellites.

Please send any amateur satellite news or reports to:
ans-editor@amsat.org

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* Volunteers are needed to help at the AMSAT booth at Dayton. Gould *
* WA4SXM, is looking for volunteers to help man the AMSAT booth dur- *
* ing the 2012 Hamvention. People are needed all 3 days for 2 hour *
* shifts. Please send the days and times you are available to help *
* as well as how many shifts you are willing to work via e-mail to *
* wa4sxm at amsat.org. *
* Monitor http://www.amsat.org/amsat-new/hamvention/2012/Dayton.php *
* for the latest AMSAT at Dayton news and developments *
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In this edition:
* AMSAT-NA BOD Nominations Due
* ARISS Mentor Introduction at Dayton 2012
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* Satellite Operation Planned for UK Olympic Special Event Station
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* HAMSAT VO-52 User Reports Requested
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* 2012 AMSAT-NA Symposium Update
* New Feature For SatPC32 Adjusts Doppler From Satellite Point of View
* ARISS Status Report - 19 March 2012

SB SAT @ AMSAT $ANS-085.01
ANS-085 AMSAT News Service Weekly Bulletins

AMSAT News Service Bulletin 085.01
From AMSAT HQ SILVER SPRING, MD.
March 25, 2012
To All RADIO AMATEURS
BID: $ANS-085.01

AMSAT-NA Board of Directors Nominations
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It is time to submit nominations for the upcoming open seats on the AMSAT-NA Board of Directors. A valid nomination requires either one current Member Society, or five current individual members in good standing, to nominate an AMSAT-NA member for the position.

Three directors have terms expiring this year: Tom Clark, K3IO; Lou McFadin, W5DID; and Gould Smith, WA4SXM. The three nominees receiving the highest number of votes will be seated as regular board members with two year terms. The two nominees receiving the next highest number of votes will be seated as alternates for one year.

Written nominations, consisting of names, calls and individual signatures, should be mailed to: AMSAT-NA, 850 Sligo Ave #600, Silver Spring, MD, 20910. They must be received no later than June 15th. No other action is required.

Nominations may also be made by electronic means including e-mail, FAX, or electronic image of a petition. Electronic petitions should be sent to MARTHA@AMSAT.ORG or faxed to 301-608-3410, and also must be received by June 15th. If using any electronic submission, there is a second, verifying step:

ELECTRONIC SUBMISSIONS WITHOUT THIS SECOND, WRITTEN VERIFICATION ARE NOT VALID UNDER THE EXISTING AMSAT-NA BYLAWS. A verifying traditional written petition MUST be received at the AMSAT-NA office at the above address within 7 days following the close of nominations.

[ANS Thanks AMSAT Secretary Alan Biddle, WA4SCA for the above information]

ARISS Mentor Introduction at Dayton 2012

AMSAT and ARRL are teaming up during the 2012 Hamvention to recruit new ARISS (Amateur Radio on the International Space Station) mentors. Friday and

Saturday (May 18 & 19) at 4pm in the ARRL stage area AMSAT will explain the need for additional ARISS mentors and the requirements and responsibilities needed to help provide a reliable conversation between astronauts and selected schools or groups. We encourage anyone interested in helping make future school contacts with the ISS successful to please attend.

[ANS Thanks the ARISS Team for the above information]

NASA'S GRAIL MOONKAM Returns First Student-selected Lunar Images

WASHINGTON -- One of two NASA spacecraft orbiting the moon has beamed back the first student-requested pictures of the lunar surface from its onboard camera. Fourth grade students from the Emily Dickinson

Elementary School in Bozeman, Mont., received the honor of making the first image selections by winning a nationwide competition to rename the two spacecraft.

The image was taken by the MoonKam, or Moon Knowledge Acquired by Middle school students. Previously named Gravity Recovery And Interior Laboratory (GRAIL) A and B, the twin spacecraft are now called Ebb and Flow. Both washing-machine-sized orbiters carry a small MoonKAM camera. Over 60 student-requested images were taken aboard the Ebb spacecraft from March 15-17 and downlinked to Earth on March 20.

"MoonKAM is based on the premise that if your average picture is worth a thousand words, then a picture from lunar orbit may be worth a classroom full of engineering and science degrees," said Maria Zuber, GRAIL mission principal investigator from the Massachusetts Institute of Technology in Cambridge, Mass. "Through MoonKAM, we have an opportunity to reach out to the next generation of scientists and engineers. It is great to see things off to such a positive start."

GRAIL is NASA's first planetary mission to carry instruments fully dedicated to education and public outreach. Students will select target areas on the lunar surface and request images to study from the GRAIL MoonKAM Mission Operations Center in San Diego.

The MoonKAM program is led by Sally Ride, America's first woman in space, and her team at Sally Ride Science in collaboration with undergraduate students at the University of California in San Diego. More than 2,700 schools spanning 52 countries are using the MoonKAM cameras.

"What might seem like just a cool activity for these kids may very well have a profound impact on their futures," Ride said. "The students really are excited about MoonKAM, and that translates into an excitement about science and engineering."

Launched in September 2011, Ebb and Flow will answer longstanding questions about the moon and give scientists a better understanding of how Earth and other rocky planets in the solar system formed.

NASA's Jet Propulsion Laboratory in Pasadena, Calif., manages the GRAIL mission for NASA's Science Mission Directorate in Washington.
GRAIL is part of the Discovery Program managed at NASA's Marshall Space Flight Center in Huntsville, Ala. Lockheed Martin Space Systems in Denver built the spacecraft.

To view the student-requested images, visit:

http://images.moonkam.ucsd.edu

For more information about MoonKAM, visit:

https://moonkam.ucsd.edu

For more information about GRAIL, visit:

http://www.nasa.gov/grail

[ANS Thanks Michael Williams, K9QHO for the above information]

Satellite Operation Planned for UK Olympic Special Event Station

This week John Warburton, G4IRN announced The Radio Society of Great Britain will activate two special event call-signs to celebrate the London 2012 Olympic and Paralympic Games:

+ 2O12L (Two Oscar One Two Lima) from London, England 2O12W (Two Oscar
+ One Two Wales) from Barry, Wales.

The London station, 2012L will be active through the duration of the Games, located at the historic Eltham Palace, south-east London on 160m-2m, all modes. More information on the web site: http://www.2O12L.com

The Welsh station 2O12W will also be active on all bands from 160m to 23cms and all modes including SSTV and satellite from Whitmore Bay, Barry Island, Vale of Glamorgan, Wales. More information on web site: http://www.2O12W.com.

2O12L and 2O12W go on the air on 27th July 2012.

[ANS thanks The Radio Society of Great Britain and Southgate News for the above information]

Masat-1 Experiment Required Silent Mode for a Short Period of Time

Masat-1 (MO-72) recently has been switched to a 'silent mode' on March 16, March 21, and March 22 to perform long term, sensitive electromagnetic measurements which require the switching off the satellite's transmitter. In silent mode, all RF transmission from the satellite is turned off, while the satellite receiver makes the required measurements. After these experiments regular tele-metry transmission resumed operation.

MO-72 Call sign: HA5MASAT
TX frequency: 437.345 MHz
Modulation: CW (120 char/min.), 2-GFSK (625 and 1250 bit/s) TX power: 100 and 400 mW

Soundcard software to capture and decode the GFSK telemetry can be downloaded from: http://cubesat.bme.hu/en/radioamatoroknek/
The latest keplerian elements are also available on this site.

[ANS thanks the Masat-1 Team and AMSAT-UK for the above information]

HAMSAT VO-52 User Reports Requested

AMSAT-India Secretary Nitin, VU3TYG says the user feedback form (in Word format) requested by VO-52 controllers has been posted on the web for download from:
http://www.amsatindia.org/reports/VO-52-Feedback.doc

HAMSAT VO-52 controllers at ISRO thanked amateur radio operators for the reports received after VO-52 was reactived with the Dutch Transponder. They are in the process of documenting anomaly analysis and Transponder 2 Switch ON' report containing the feedback from users.

Reports are requested to be sent in the Word format as attachments to e-mail sent to: tprangan@istrac.org and copied to wmy@isac.gov.in.

[ANS thanks AMSAT-India Secretary Nitin, VU3TYG and Mani, VU2WMY at India ISRO Satellite Centre for the above information]

Satellite Shorts From All Over

+ AMSAT to facilitate student satellite contacts at Dayton. All students attending the 2012 Dayton Hamvention are encouraged to come by the Satellite Demonstration Area just outside of the Ball Arena entrance and make a contact using the amateur satellites. There will be AMSAT volunteers there to explain how to make the contacts and during actual satellite passes will try to get as many students as possible to complete contacts. There are lists of satellite pass times in the satellite demonstration area and at the AMSAT booth (BA444-BA449). (Gould, WA4SXM)

+ NASA released a new narrated animation depicting the planned 2014 launch of the Orion spacecraft on the Exploration Flight Test-1 (EFT-1) mission to a 3600 mile altitude orbit:
http://tinyurl.com/OrionOrbitTest (YouTube)
Full article at: http://tinyurl.com/OrionArticle (UniverseToday)

+ Paul, 2E1EUB says his next mobile satellite operations as 2M1EUB from his van will be starting March 24 for 7 days from the east coast of Scotland. Main operations are planned for AO-7 Mode A/B and other satellites as available. Paul will post his latest information on amsat-bb and also on the lookup at QRZ.com for 2M1EUB.

+ The Project Blue Horizon 6 high-altitude transatlantic balloon flight took off on Friday, March 23 at 2300 EST (0300 Saturday UT) from Owego, NY transmitting on 7.1023 and 10.1466 MHz CW with the N2XE call sign and 144.390 MHz FM APRS using the KD2AUD call sign. Please send reports via e-mail to pbh18.data@gmail.com or manually enter received data points at http://www.projectbluehorizon.com/ More information is available on their web page.

+ Congratulations to Rick Walter, WB3CSY, for earning VUCC Satellite certificate #228 with 165 confirmed grids. Rick wrote, "I would like to thank the many satellite operators who continually take time to stop during their travels and give us rare grids. It would

be much more difficult to obtain this prestigious award without their help."

+ The next Hudson Valley Satcom Net is Thursday March 29, 8:00PM EDT (UTC-4) on the 146.97 MHz Mt. Beacon ARC Repeater and also on the N2EYH-L Echolink Node. More information at: http://www.hvsatcom.org and http://www.wr2abb.org/ (Stu, WA2BSS)

+ Watch the BBC video of UKube-1, planned to launch in 2013: http://www.bbc.co.uk/news/uk-scotland-glasgow-west-17439236 UKube-1 will carry a set of AMSAT-UK FUNcube boards that will provide a 435/145 MHz linear transponder for SSB/CW amateur radio communications. See also: http://www.uk.amsat.org/5933

+ John, K8YSE reported that Yuri, UT1FG/MM, who has been so active on the birds may be off the air for a short time. He is navigating the St. Lawrence Seaway and has been too busy to operate on the satellites. There are many inspection requirements for a ship coming into the Great Lakes and his duties are such that he does not have much free time. He will be in Montreal shortly. All of his equipment is working fine. Yuri will be operating as time permits.

+ The Winter 2012 TAPR Packet Status Register Journal now available for download: http://www.tapr.org/psr/psr117.pdf. You can download previous editions from http://www.tapr.org/psr.html. This quarterly Journal is full of Technical, Non-Technical and User Digital information and articles.

+ Watch a video of time lapse images from the ISS showing how stars appear from space: http://vimeo.com/ajrclips/starsfromspace. A jaw dropping flight of the ISS over the aurora can be viewed at: http://tinyurl.com/AuroraGreatLakes

+ USAF and Lockheed have Satellite Problems Too:
http://tinyurl.com/milsat-rescue
At least their problems had a happy ending.

+ New Echolink Net. Saturday evenings at 8pm Eastern. The NET is titled "SATCHAT". Check in at the AMSAT Conference on Echolink and join the conversations about satellites, ask questions and hear what other people in the country are doing for satellite activity. It is hosted by Vince Waelti, K9TSU. Stop by and add your experiences to the group.

[ANS thanks everyone for the above information]

Symposium 2012 Monday Trip to the Kennedy Space Center

Those attending the 2012 AMSAT Symposium and interested in a Monday Trip (Oct 29) to the Kennedy Space Center please contact Martha via email: martha at amsat.org.

The trip will include a round trip bus from the hotel and entrance to the Space Center. The cost will be about $100. This is a wonderful experience for those that haven't been and for those that have been multiple times. We need to get an idea of how many will participate to select the correct bus.

[ANS Thanks Gould, WA4SXM for the above information]

New Feature For SatPC32 Adjusts Doppler From Satellite Point of View

Erich, DK1TB has added a new feature into SatPC32 V12.8b which will allow adjustment for doppler shift between two separate stations so each will appear to be on the same frequency. From a ground station point of view each station will see a different doppler shift unless they are located physically near each other. What is desired is that both stations will appear on the same frequency from the satellite receiver's point of view.

The whole idea of doppler correction is to be at a constant frequency within the satellite receiver passband. To do that you have to adjust your uplink frequency constantly. And you have to adjust your down-link frequency to continue to hear yourself or someone else using full doppler correction.

Erich has now added the option of seeing the frequency you are on at the satellite receiver. This is a common frame of reference so if you tell someone you'll be on 435.845 at the satellite, they can be on that same frequency even though your terrestrial dial frequencies will be much different. Just adjust your receiver or use the up/down buttons in SatPC32 to set your frequency shown in the "Sat" window. That frequency will remain constant as your uplink and downlink are controlled by SatPC32.

Staying at a constant frequency at the satellite allows many stations to share the bird without drifting into each other. And being able to know exactly where you are in the passband without doing the calcula-tion in your head gives you more time to concentrate on making a suc-cessful QSO.

This feature is implemented by loading a patch file for SatPC32, V12.8b which can be found in the "downloads" link at:
http://www.dk1tb.de - Scroll down to Section 7, Patches.

Erich, DK1TB donates the proceeds from the sale of SatPC32 to AMSAT. When you purchase this software you are helping AMSAT.

You can download the software from the SatPC32 website at:
http://www.dk1tb.de/ A CD-ROM with the software is available from the AMSAT Store: http://www.amsat-na.com/store/item.php?id=100017
To activate the downloaded version of the program, you can purchase a registration code via the AMSAT online store or by calling the AMSAT office. See: http://www.amsat-na.com/store/item.php?id=100020

[ANS thanks John Papay, K8YSE for the above information]

(ARISS) Status Report March 19, 2012

1. Upcoming School Contacts

Centre de Formation de la Base Airienne de Payerne, Switzerland had an Amateur Radio on the International Space Station (ARISS) contact was on Wednesday, March 21 at 08:39 UTC. The contact was held in the museum "Clin d'Ailes", located on the Payerne Swiss Airforce Base that has on display military aeronautics exhibits from the second half of the 20th century. Mr. Claude Nicollier, HB9CN, who is the first Swiss astronaut and president of the Museum Foundation, attended the event. The Clin d'Ailes Swiss Air Force Museum Ham Radio Club, holding callsigns HB4FR and HB9SPACE, set up its radio for the contact. Students launched a stratospheric balloon equipped with video and photo cameras and sensors and beacons two weeks prior to the event. After the ARISS contact, they presented the videos, photos and the analysis of the recorded sensor data.

Salem Elementary School in Apex, North conducted an ARISS contact on Wednesday, March 21 at 14:09 UTC via station VK5ZAI in Australia. This contact is part of a comprehensive education plan which will pique students' interest in Science, Technology, Engineering and Math (STEM).

2. Liberty Junior High Radios Don Pettit on ISS

Students attending Liberty Junior High School in Burbank, Illinois experienced a very successful Amateur Radio on the International Space Station (ARISS) contact on Wednesday, March 14. Over 800 students, teachers and guests were present as students put their questions to astronaut Don Pettit, KD5MDT on ISS. The ARISS contact highlighted the school's comprehensive education plan covering Science, Technology, Engineering and Math (STEM) subject matter. Other activities students participated in included investigating thermal properties of different materials, building models of the ISS and exploring the cast distances of space and the effect of distance and radio waves.

3. Belgium Contact Successful

An Amateur Radio on the International Space Station (ARISS) contact was held on Friday, March 16 between Middenschool de Regenboog Bree in Bree, Belgium and on-orbit astronaut Andri Kuipers, PI9ISS. A newly licensed 14 year girl operated the radio during the event while students had all 15 of their prepared questions answered. The contact was carried out as part of a curriculum covering the micro-gravity environment, history of manned spaceflight, commercial spaceflight and the construction of the ISS.

4. Leone Acciaiuoli Students Question ISS Astronaut

On Sunday, March 18, Dan Burbank, KC5ZSX fielded ten questions from youth attending the Istituto Tecnologico Statale Trasporti e Logistica "Leone Acciaiuoli" in Ortona, Italy via an ARISS contact. Approximately 200 people were in attendance, including representatives from two television stations. AMSAT-Italia also provided coverage, streaming video on the Internet. The contact complemented science courses taught at the school such as Navigation, Astronomy, Mathematics, Physics and Satellite Communications and was a featured activity during the International Day of Planetaria.

5. ARISS-U.S. Schools Selected

The NASA Teaching From Space office received 27 U.S. proposals for ARISS contacts that will be scheduled during the second half of this year. The U.S. Selection Committee reviewed the proposals and selected 18 schools for these contacts. The schools will be notified of their status early this week.

[ANS thanks Carol, KB3LKI, for the above information]

/EX

In addition to regular membership, AMSAT offers membership in the President's Club. Members of the President's Club, as sustaining donors to AMSAT Project Funds, will be eligible to receive addi- tional benefits. Application forms are available from the AMSAT Office.

Primary and secondary school students are eligible for membership at one-half the standard yearly rate. Post-secondary school students enrolled in at least half time status shall be eligible for the stu- dent rate for a maximum of 6 post-secondary years in this status. Contact Martha at the AMSAT Office for additional student membership information.

73,
This week's ANS Editor,
Dee Interdonato, NB2F

53. Weekly Highlights of Solar and Geomagnetic Activity, 19 - 25 March 2012

Newsgroup: rec.radio.amateur.space
Date: 2012-03-26 15:30:07 UTC
From: SWPC.Webmaster@noaa.gov
Message-ID: <20120326153001.E5D4D33C57@panix2.panix.com>
Source record: 103
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.dx,rec.radio.amateur.space,rec.radio.shortwave,rec.radio.info

```
:Product: Weekly Highlights and Forecasts
:Issued: 2012 Mar 26 1340 UTC
# Prepared by the US Dept. of Commerce, NOAA, Space Weather Prediction Center
# Product description and SWPC contact on the Web
# http://www.swpc.noaa.gov/weekly.html
#
# Weekly Highlights and Forecasts
#
Highlights of Solar and Geomagnetic Activity
19 - 25 March 2012

Solar activity has been at low to moderate levels for the past seven
days. The largest event of the period was a M1 x-ray event on 23
March at 1940 UTC from Region 1445 (S24, L=026, class/area Fho/280
on 25 March). Region 1445 rotated onto the southeast limb of the
solar disk late on 23 March and has since dominated in solar
activity, producing multiple C-class x-ray events. Region 1444 (N19,
L=067, class/area Cao/060 on 25 March) emerged on 23 March and has
also been active, producing multiple C-class x-ray events. Both
Regions, 1445 and 1444, produced CMEs on 25 March, however very
little effect is expected here at Earth. The remaining regions on
the solar disk remained rather quiet and stable.

No proton events were observed at geosynchronous orbit during the
summary period.

The greater than 2 MeV electron flux at geosynchronous orbit was at
predominantly high levels for the duration of the summary period.
However, on 23 and 25 March, moderate levels were observed.

The geomagnetic field ranged from quiet to active levels with an
isolated period at minor storm levels at high latitudes. On 19
March, predominantly quiet levels were observed with an isolated
active period measured early in the day, in response to the arrival
of a CME from 15 March. Quiet conditions prevailed from 20 March to
late on 22 March, when a solar sector boundary (SSB) crossing was
measured by the ACE spacecraft. Following the SSB, quiet to
unsettled levels were seen from 22 - 23 March. On 24 March, active
levels with an isolated minor storm period was observed as a small
coronal hole high speed stream (CH HSS) moved into a geoeffective
position. This CH HSS was short lived with measurements by the ACE
spacecraft indicating a quick rise in solar wind speeds to around
500 km/s followed by a quick decrease to nominal background levels.
On 25 March, activity returned to quiet levels.
```

Note: There is a gap in data from the GOES 15 spacecraft from late on 21 March through mid 23 March. This gap can be seen in the GOES 15 x-ray plot.

Forecast of Solar and Geomagnetic Activity
26 March - 21 April 2012

Solar activity is expected to be at low to moderate levels. Predominantly low levels are expected from 26 - 28 March, when old Region 1429 rotates back onto the northeast limb. M-class flare probabilities are expected to increase from 28 March - 11 April as old Region 1429 progresses across the solar disk. A return to low levels is expected to prevail for the remainder of the period, 12 - 21 April.

No proton events are forecast from 26 - 30 March. An increase to a slight chance for proton events is forecast from 31 March - 11 April as old Region 1429 populates the visible disk. A return to background proton flux levels is expected from 12 April - 21 April.

Electrons, greater than 2 MeV, are expected to be at normal to moderate levels from 26 - 28 March. From 29 March - 03 April, moderate to high levels are expected. From 04 - 13 April, a return to normal to moderate levels is expected. Moderate to high levels are expected from 14 - 18 April. A return to normal levels is expected for the remainder of the period.

The geomagnetic field is expected to be at mostly quiet levels from 26 - 27 March. Quiet to active levels are expected from 28 -29 March in response to the effects of a CH HSS. Predominantly quiet levels are expected from 30 March - 12 April. An increase to quiet to active levels is expected from 13 - 14 April in response to a CH HSS. Quiet levels are expected to prevail for the remainder of the period.

54. WSR-090 AMSAT Weekly Satellite Report

Newsgroup: rec.radio.amateur.space
Date: 2012-03-31 13:28:44 UTC
From: JoAnne Maenpaa <k9jkm@comcast.net>
Message-ID: <001901cd0f42$29ab1af0$7d0150d0$@net>
Source record: 104
Cross-posted to: rec.radio.amateur.space,rec.radio.info

```
This report is organized into three (3) parts.
Part 1 (S1) - operational analog amateur satellites
Part 2 (S2) - operational digital amateur satellites
Part 3 (S3) - non - operational satellites

SB SAT @ AMSAT W8ISS $WSR-090.S1
WSR 090 Part 1 03/30/2012

AMSAT NEWS SERVICE BULLETIN 090.S1
FROM AMSAT HQ SILVER SPRING, MD, March 30, 2012
TO ALL RADIO AMATEURS
BID: $WSR-090.S1

PW-Sat
Catalog Number:
Launch Date: Febrauary 13, 2012
Launch Site: Kourou, French Guiana

Status: On Orbit

Uplink: 435.020 MHz FM
Downlink: 145.900 MHz DSB

Beacon:

Callsign:

URL:
```

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum2
[03162012]
��DO-64 Delfi-C3
Catalog number: 32789
Launch Date: April 28, 2008 0354z
Launch site: Satish Dhawan Space Centre, India

```
Status: Operational
Current Mode: Science Mode - Beacon ONLY

Telemetry: 145.870 MHz

Downlink: 145.880 to 145.920 MHz
Uplink: 435.530 to 435.570 MHz

Delfi-C3 web page: http://www.delfic3.nl/
```

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnumh
[02092011]
��VO-52 HAMSAT
Catalog number: 28650
Launch Date: May 05, 2005 0444z
Launch site: Satish Dhawan Space Centre, India

Status: Operational
Current Mode: U/v - Dutch Transponder

Frequencies:
Indian Transponder:
Uplink: 435.220 to 435.280 MHz LSB/CW
Downlink: 145.930 to 145.870 MHz USB/CW

Dutch Transponder:
Uplink: 435.225 to 435.275 MHz LSB/CW
Downlink: 145.925 to 145.875 MHz USB/CW

Indian Beacon: 145.9360 MHZ CW
Dutch Beacon: 145.860 MHz 12WPM with CW message

Mode and Antenna Polarization:
V: LHCP
U: RHCP

Official Webpage: http://www.amsatindia.org/hamsat.htm

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum0

To know what transponder is switched on please listen for the beacon
that is active. Each transponder has a different beacon.
[03232012]
��SO-50 SAUDISAT-1C
Catalog number: 27607
Launch date: December 20, 2002 1700z
Launch site: Baikonur, Kazakhstan

Status: Operational

Current Mode: V/u

Uplink: 145.850 MHz FM - 67.0 Hz PL tone
Downlink: 436.795 MHz

Mode and Antenna Polarization:
V: Linear
U: Linear

Official Webpage: http://saudisat.kacst.edu.sa/index.shtml
(not up and running currently)

To switch the transmitter on, you need to send a CTCSS tone of 74.4 Hz. The order of operation is thus: (allow for Doppler as necessary):
1) Transmit on 145.850 MHz with a tone of 74.4 Hz to arm the 10 minute timer on board the spacecraft.
2) Now transmit on 145.850 MHz (FM Voice) using 67.0 Hz to PT the repeater on and off within the 10 Minute window.
3) Sending the 74.4 tone again within the 10 minute window will reset the 10 minute timer.
[02092011]
��FO-29 JAS-2
Catalog number: 24278
Launch Date: August 17, 1996

Status: Operational
Current Mode: V/u (Mode JA)

Voice/CW (Mode JA)
Uplink: 145.90 to 146.00 MHz CW/LSB
Downlink: 435.80 to 435.90 MHz CW/USB
Beacon: 435.795 MHz

Digital Mode JD
Uplinks: 145.850 MHz FM
145.870 MHz FM
145.910 MHz FM
Downlink: 435.910 MHz 1200-baud BPSK or 9600-baud FSK
Callsign: 8J1JCS
Digitalker: 435.910 MHz

Mode and Antenna Polarization:
V: RHCP
U: RHCP

For current operational schedule for FO-29:
http://www.ne.jp/asahi/m-arai/gkz/satinfo/fo29e.htm

JARL English webpage:
http://www.jarl.or.jp/English/5_Fuji/ejasmenu.htm

AMSAT-NA Webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID
�retURL�atellites/status.php

Mineo Wakita, JE9PEL, has created a simple decoder program for FO29's CW telemetry downlink: http://www.ne.jp/asahi/hamradio/je9pel/fo29cwts.htm
[01122012]
��AO-27 AMRAD
Catalog number: 22825
Launch date: September 26, 1993 0140z
Launch site: Kourou, French Guiana

Status: Operational

Current Mode: V/u

Uplink: 145.850 MHz FM
Downlink: 436.797 MHz FM

Mode and Antenna Polarization:
V: Linear
U: Linear

Official Webpage: http://www.ao27.org
[02092011]
��AO-7 AMSAT OSCAR 7
Catalog number: 07530
Launch Date: November 15, 1974
Launch site: Vandenberg AFB, California, USA

Status: Operational

Current Mode: Alternating between Mode A and B every 24 hours

Uplink: 145.850 to 145.950 MHz CW/USB Mode A
432.125 to 432.175 MHz CW/LSB Mode B
Downlink: 29.400 to 29.500 MHz CW/USB Mode A (1W PEP)
145.975 to 145.925 MHz CW/USB Mode B (8W PEP)
145.975 to 145.925 MHz CW/USB Mode C (2W PEP)
Beacons: 29.502 MHz CW
145.972 MHz CW
435.100 MHz CW
2304.100 MHz CW

Official Webpage:
http://www.amsat.org/amsat-new/satellites/sat_summary/ao7.php

The AO-7 Logbook and Resource Website:
http://www.planetemily.com/ao7/
[02092011]
��INTERNATIONAL SPACE STATION (ISS) - ARISS
Catalog number: 25544
Launch date: November 20, 1998 0640z (ZARYA module)
Launch sites: Baikonur, Kazakhstan
Kourou, French Guiana
Uchinoura Space Center, Japan
Kennedy Space Center, Titusville, Florida, USA

Status: Operational

Current Active Modes: FM Repeater - OFF
Voice - V/v
BBS - OFF
2m APRS - ON
70cm Digi - ON
SSTV - OFF

Expedition 30/31 Crew (November 2011 - July 2012):
Commander: Dan Burbank KC5ZSX
Flight Engineer: Anton Shkaplerov
Flight Engineer: Anatoly Ivanishin
Flight Engineer: Oleg Kononenko RN3DX
Flight Engineer: Andr&#65533; Kuipers PI9ISS
Flight Engineer: Don Pettit KD5MDT

Available Modes and Frequencies:
Digital/APRS:
Worldwide 2m packet uplink: 145.825 MHz FM 1k2
Worldwide 2m packet downlink: 145.825 Mhz FM 1k2
Worldwide 70cm packet downlink: 437.550 Mhz FM 1k2
Worldwide 70cm packet downlink: 437.550 Mhz FM 1k2

Voice:
Region 1 voice uplink: 145.200 MHz FM
Region 2/3 voice uplink: 144.490 MHz FM
Worldwide downlink: 145.800 MHz FM

Crossband Repeater:
Repeater Uplinks: 1269.650 MHz FM
437.800 MHz FM
145.990 MHz FM - 67.0 PL (Kenwood)
Repeater Downlink: 145.800 MHz FM
437.800 MHz FM (Kenwood)

SSTV Robot 36:
Downlink: 145.800 MHz FM

Mode and Antenna Polarization:
V: Linear
U: Linear

Callsigns:
Belgian: OR4ISS
German: DP0ISS
Russian: RS0ISS
RZ3DZR
United States: NA1SS
2m Packet Mailbox: RS0ISS-11
2m Digipeater alias: ARISS
70cm Packet Mailbox: RS0ISS-1
70cm Digipeater callsign: RS0ISS
70cm Digipeater alias: ARISS

Official ARISS Webpage: http://www.rac.ca/ariss
ISS Fan Club Webpage: http://www.issfanclub.com
APRS tracking page: http://www.ariss.net/

ISS Daily Crew Schedule: http://spaceflight.nasa.gov/station/timelines
Remember that the crew operates on UTC time. Also, all of the time
line is NOT translated from Russian and posted.
[03302012]

NNNN
/EX

SB SAT @ AMSAT W8ISS $WSR-090.S2
WSR 090 Part 2 03/30/2012

AMSAT NEWS SERVICE BULLETIN 090.S2
FROM AMSAT HQ SILVER SPRING, MD, March 30, 2012
TO ALL RADIO AMATEURS
BID: $WSR-090.S2

XaTcobeo
Catalog Number: 38082
Launch Date: Febrauary 13, 2012
Launch Site: Kourou, French Guiana

Status: Operational

Uplink:
Downlink: 437.365 MHz FFSK with AX.25

Beacon:

Callsign:

URL:

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum5
[03162012]
��UniCubeSat
Catalog Number:
Launch Date: Febrauary 13, 2012
Launch Site: Kourou, French Guiana

Status: Operational

Uplink:
Downlink: 437.305 MHz 9k6 bps FSK

Beacon:

Callsign:

URL:

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum3
[03162012]
��Robusta
Catalog Number:
Launch Date: Febrauary 13, 2012
Launch Site: Kourou, French Guiana

Status: On Orbit

Uplink:
Downlink: 437.325 MHz 1k2 FM telemetry (data every 1 min, 20 sec. burst)

Beacon:

Callsign:

URL:

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum2
[02142012]
��MO-72 MaSat-1
Catalog Number: 38081
Launch Date: Febrauary 13, 2012
Launch Site: Kourou, French Guiana

Status: Operational

Uplink:
Downlink: 437.345 MHz GFSK 625/1250 bps
437.345 MHz CW

Beacon:

Callsign:

URL:

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum6
[03232012]
��Goliat
Catalog Number: 38085
Launch Date: Febrauary 13, 2012
Launch Site: Kourou, French Guiana

Status: Operational

Uplink:
Downlink: 437.485 MHz 1k2 AFSK

Beacon:

Callsign:

URL:

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum�
[03162012]
��E-Star
Catalog Number: 38079
Launch Date: Febrauary 13, 2012
Launch Site: Kourou, French Guiana

Status: On Orbit

Uplink:
Downlink: 437.445 MHz 1k2 bps AFSK

Beacon:

Callsign:

URL:

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum0
[03232012]
��ALMASat1
Catalog Number: 38078
Launch Date: Febrauary 13, 2012
Launch Site: Kourou, French Guiana

Status: On Orbit

Uplink:
Downlink: 437.465 MHz 1k2 bps FSK
2407.850 MHz

Beacon:

Callsign:

URL:

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum9
[02212012]
��RS-39 Chibis-M
Catalog Number: 37841
Launch Date: October 30, 2011 10:11:00 UTC
Launch site: Tyuratam (Baikonur Cosmodrome), Kazakhstan

Status: Operational

Uplink:
Downlink:

Beacon: 435.315 MHz CW
435.215 MHz CW

Callsign:

URL:

IARU coordination status page:
[01122012]
��JUNGU
Catalog Number: 37841
Launch Date: October 12, 2011 05:30:00 UTC

Launch site: Satish Dhawan Space Centre, India

Status: On Orbit

Uplink: 145.??? MHz 1k2 (mode?)
Downlink: 437.505 MHz 9k6 (mode?)

Beacon: 437.275 MHz 15 wpm (?) CW

Callsign:

URL: http://www.iitk.ac.in/me/jugnu/index.htm

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum0
[01122012]
��SRMSAT
Catalog Number: 37839
Launch Date: October 12, 2011 05:30:00 UTC
Launch site: Satish Dhawan Space Centre, India

Status: On Orbit

Uplink: 145.900 MHz 1k AX.25 (speed?)
Downlink: 437.500 MHz 2k4 AX.25

Beacon: 437.425 MHz 12 wpm CW

Callsign:

URL: http://srmsat.in/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum1
[01122012]
��HRBE (E1P Explorer 1 [Prime] CubeSat (E1P-U2))
Catalog Number: 37855
Launch Date: October 28, 2011
Launch site: Vandenberg Air Force Base, California, USA

Status: On Orbit

Uplink: 437.305 MHz (???)
Downlink: 437.505 MHz AX.25 (SSB?)

Beacon:

Callsign:

URL: http://ssel.montana.edu/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum6
[01122012]
��M-Cubed

Catalog Number: 37855
Launch Date: October 28, 2011
Launch site: Vandenberg Air Force Base, California, USA

Status: On Orbit

Uplink:
Downlink: 437.485 MHz AX.25

Beacon:

Callsign:

URL: http://umcubed.org/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum!5
[01122012]
��RAX-2
Catalog Number: 37853
Launch Date: October 28, 2011
Launch site: Vandenberg Air Force Base, California, USA

Status: Operational

Uplink:
Downlink: 437.345MHz 9k6 GMSK

Beacon:

Callsign:

URL: http://rax.engin.umich.edu//

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum"1
[03232012]
��AO-71 AubieSat-1
Catalog Number: 37854
Launch Date: October 28, 2011
Launch site: Vandenberg Air Force Base, California, USA

Status: On Orbit

Uplink:
Downlink: 437.475 MHz 1k2 AX.25

Beacon: 437.475 MHz CW

Callsign: KI4NQO

URL: http://www.space.auburn.edu/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum8

[12262011]
��O/OREOS
Catalog Number: 37224
Launch Date: November 20, 2010
Launch site: Kodiak Launch Complex, Alaska, USA

Status: On Orbit

Uplink:
Downlink: 437.035 MHZ AX.25

Beacon:

Callsign:

URL: http://www.ooreos.org/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum6
[02092011]
��Rax-1 Radio Aurora Explorer
Catalog Number: 37223
Launch Date: November 20, 2010
Launch site: Kodiak Launch Complex, Alaska, USA

Status: On Orbit

Uplink:
Downlink: 437.505 MHz 9k6 GMSK

Beacon:

Callsign: RAX-1

URL: http://rax.engin.umich.edu/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum5
[02092011]
��FO-69 Fastrac-1 Sara Lily
Catalog Number: 37227
Launch Date: November 20, 2010
Launch site: Kodiak Launch Complex, Alaska, USA

Status: Operational

Uplink 1: 145.980 MHz 1k2 baud
Uplink 2: 145.825 MHz 1k2 baud
Downlink: 437.345 MHz 1k2 and 9k6 baud

Beacon: 437.435 MHz 1k2 AX.25

Callsign: Fast1

URL: http://fastrac.ae.utexas.edu/index.php

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=
[07052011]
==FO-70 Fastrac-2 Emma
Catalog Number: 37380
Launch Date: November 20, 2010
Launch site: Kodiak Launch Complex, Alaska, USA

Status: Operational

Uplink 1: 435.025 MHz 1k2 baud
Uplink 2: 437.435 MHz 9k6 baud
Downlink: 145.825 MHz 1k2 and 9k6 baud

Beacon: 145.825 MHz 1k2 AX.25

Callsign: Fast2

URL: http://fastrac.ae.utexas.edu/index.php

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=
[12162011]
==StudSat
Catalog Number: 36796
Launch Date: July 12, 2010 0352z
Launch site: Satish Dhawan Space Centre, India

Status: On Orbit

Uplink: 437.505MHz, 9600bps FSK
Downlink: 437.505MHz, 9600bps FSK
Beacon : 437.505MHz, 20bps ASK

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum4
[02092011]
==TIsat-1
Catalog Number: 36799
Launch Date: July 12, 2010 0352z
Launch site: Satish Dhawan Space Centre, India

Status: On orbit

Callsign: HB9DE

Uplink: 145.980MHz FM, AFSK
Downlink: 437.305MHz FM, AFSK
Beacon: 437.305MHz CW

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum8
[02092011]
==SwissCube
Catalog Number: 35932

Launch Date: September 23, 2009 0621z
Launch site: Satish Dhawan Space Centre, India

Status: Operational

Callsign: HB9EG

Beacon(100mw): 437.5050MHz CW
Beacon(1w): 437.5050MHz FSK 1k2bps

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum9
[02092011]
��UWE-2
Catalog Number: 35934
Launch Date: September 23, 2009 0621z
Launch site: Satish Dhawan Space Centre, India

Status: In Orbit

Beacon(500mw): 437.3850 MHz AFSK 1k2bps
437.3850 MHz FSK 9k6bps

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum0
[02092011]
��ITUpsAT1
Catalog Number: 35935
Launch Date: September 23, 2009 0621z
Launch site: Satish Dhawan Space Centre, India

Status: Operational

Beacon(100mw): 437.325MHz CW
Beacon(1w): 437.325MHz 19k2bps

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum3
[02092011]
��BEESAT
Catalog Number: 35933
Launch Date: September 23, 2009 0621z
Launch site: Satish Dhawan Space Centre, India

Status: Operational

Callsign: DP0BEE

Beacon(100mw): 436.000MHz CW
Beacon(500mw): 436.000MHz GMSK 4k8bps
Beacon(500mw): 436.000MHz GMSK 9k6bp
[02092011]
��CP-6
Catalog Number: 35004

Launch Date: May 19, 2009 2355z
Launch site: Wallops Island, Virginia, USA

Status: Operational

Downlink: 437.365 MHz 1k2 AFSK

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum1
[01122012]
��HAWKSAT 1
Catalog number: 35003
Launch Date: May 19, 2009 2355z
Launch site: Wallops Island, Virginia, USA

Status: operational

Downlink: 437.345 MHz ?

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum5
[01122012]
��Pharmasat
Catalog Number: 35002
Launch Date: May 19, 2009 2355z
Launch site: Wallops Island, Virginia, USA

Status: Operational

Downlink: 437.465 MHz 1k2 AFSK

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum�
[02092011]
��ANUSAT
Catalog Number: 34808
Launch Date: April 20, 2009 0115z
Launch Site: Satish Dhawan Space Centre, India

Status: ?

Downlink: 435.000 MHz
Uplink: 145.800 MHz

Telemetry: 137.400 MHz
[02092011]
��SOHLA-1 (ASTRO TECH.)
Catalog Number: 33496
Launch Date: January 23, 2009 0354z
Launch site: Tanegashima Space Center, Japan

Status: Operational

Proposed Frequencies and Modes:
Downlink: 437.505 MHz AFSK/CW
Beacon: 437.505 MHz AFSK/CW

Callsign:

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum1
[02092011]
��KAGAYAKI (Solan Co.)
Catalog Number: 33495
Launch Date: January 23, 2009 0354z
Launch site: Tanegashima Space Center, Japan

Status: In Orbit

Downlink: 437.375 MHZ FSK9k6/CW
Beacon: 437.375 MHz FSK9k6/CW

IARU coordination status page:

AMSAT-NA webpage:

[02092011]
��STARS (Kagawa Univ.) (Twin Satellites)
Catalog Number: 33498
Launch Date: January 23, 2009 0354z
Launch site: Tanegashima Space Center, Japan

Status: Operational ?

Downlinks: 437.485 MHz FM/CW
437.465 MHz FM/CW
Beacons: 437.305 MHz FM/CW
437.275 MHz FM/CW

Callsigns: JR5YBN
JR5YBO

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum�

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID1&retURL
�atellites/status.php
[02092011]
��KKS-1 (Tokyo MCIT)
Catalog Number: 33499
Launch Date: January 23, 2009 0354z
Launch site: Tanegashima Space Center, Japan

Status: Operational

Downlink: 437.455 MHz AFSK/CW
Beacon: 437.385 MHz AFSK/CW

Callsign: JQ1YYY

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum7

AMSAT-NA webapge:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID0&retURL
�atellites/status.php
[20092011]
��PRISM (Tokyo Univ.)
Catalog Number: 33493
Launch Date: January 23, 2009 0354z
Launch site: Tanegashima Space Center, Japan

Status: Operational ?

Downlink: 437.425 MHz AFSK/GMSK/CW
Beacon: 437.250 MHz AFSK/GMSK/CW

Callsign: JQ1YCX

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum�

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID9&retURL
�atellites/status.php
[02092011]
��RS-30 Radio Sputnik 30 (Yubileiny)
Catalog Number: 32953
Launch Date: May 23, 2008 1520z
Launch site: Plesetsk Missile and Space Complex, Russia

Status: Operational

Curent Modes: Telemetry
Audio
Images

Downlinks: 435.315 MHz
435.215 MHz

AMSAT-NA website:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID5&ret
URL�atellites/status.php

Official website:
http://www.npopm.com/?cid�oca&caidC
[02092011]
��CanX-2
Catalog number: 32790
Launch Date: April 28, 2008 0354z
Launch site: Satish Dhawan Space Centre, India

Status: Operational in range of ground station only

Downlink: 437.478 MHz GFSK

For the latest project status update please visit the Can X-2 web
page: http://www.utias-sfl.net/nanosatellites/CanX2/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnumF
[02092011]
��AAUSAT-II
Catalog number: 32788
Launch Date: April 28, 2008 0354z
Launch site: Satish Dhawan Space Centre, India

Status: Operational

Downlink: 437.425 MHz 1k2 baud packet

For the latest project status update please visit the AAUSAT-II web
page:
http://www.aausatii.aau.dk/homepage/index.php?language&page&me

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum`
[02092011]
��CO-65 CUTE-1.7+APD II
Catalog number: 32785
Launch Date: April 28, 2008 0354z
Launch site: Satish Dhawan Space Centre, India

Status: Operational

Downlink: 437.475 MHz 9k6 Packet
Uplink: 1267.600 Mhz

Telemetry Beacon:
Downlink: 437.2750 MHz CW

For the latest project status update please visit the Cute-1.7+APD II
web page: http://lss.mes.titech.ac.jp/ssp/cute1.7/index_e.html

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnumx

Command Station blog website:
http://lss.mes.titech.ac.jp/ssp/cute1.7/blog/

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID2&retURL
atellites/status.php
[03232012]
��Compass-1
Catalog number: 32787
Launch Date: April 28, 2008 0354z
Launch site: Satish Dhawan Space Centre, India

Status: Operational

Current Mode: dependant on last received command

Uplink: 145.980 MHz FM
Downlink: 437.275 Mhz CW
437.405 MHz Packet

For the latest project status update please visit the Compass 1 web
page: http://www.raumfahrt.fh-aachen.de/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnumR

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID4&retURL
=atellites/status.php
[06162011]
==CO-66 Seeds II
Catalog number:
Launch Date: April 28, 2008 0354z
Launch site: Satish Dhawan Space Centre, India

Status: Operational

Downlink: 437.485 MHz

Callsign: JQ1YGU

For the latest project status update please visit the Seeds 2 web
page: http://cubesat.aero.cst.nihon-u.ac.jp/english/seeds_2_e.html

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum6

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID3&retURL
=atellites/status.php
[02092011]
==CAPE-1
Catalog Number: 31130
Launch Date: April 17,2007 0702z
Launch site: Baikonur, Kazakhstan

Status: Intermittent

Current Mode: /u

TLM Downlink: 435.245 MHz 9600 bs FSK AX.25
CW Beacon: 435.245 MHz CW

Callsign: K5USL

TLM and CW interchange every 30 seconds.

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID&#65533;&retURL
/satellites/status.php

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnumr
[02092011]
&#65533;&#65533;CP3
Catalog Number: 31129
Launch Date: April 17,2007 0702z
Launch site: Baikonur, Kazakhstan

Status: Operational

Current Mode: /u

Downlink: 436.845 MHz 1200 bps AFSK AX.25

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnumt
[02092011]
&#65533;&#65533;CO-58 CubeSat XI-V
Catalog number: 28895
Launch Date: October 27, 2005 0652z
Launch site: Plesetsk Missile and Space Complex, Russia

Status: Operational - CW Beacon only

Current Mode: /u

Telemetry Downlink: 437.4250 MHz AFSK 1200bps using AFK protocol
Beacon: 437.2750 MHz CW

Callsign: JQ1YGW

Official Webpage: http://www.space.t.u-tokyo.ac.jp/cubesat/mission/V/

Pictures received by Mineo Wakita - JE9PEL:
http://www.ne.jp/asahi/hamradio/je9pel/xivpicte.htm

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum7
[02092011]
&#65533;&#65533;CO-57 CubeSat XI-IV
Catalog number: 27848
Launch date: June 30, 2003 1415z
Launch site: Plesetsk Missile and Space Complex, Russia

Status: ?????

Current Mode: /u

Beacon: 436.8475 MHz CW
Telemetry : 437.4900 MHz AFSK 1200 BPS

Callsign: JQ1YGW

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID&#65533;&retURL
&#65533;atellites/status.php

Official Webpage: http://www.space.t.u-tokyo.ac.jp/cubesat/mission/V/
[02092011]
&#65533;&#65533;QuakeSat
Catalog Number: 27845
Launch Date: June 30, 2003 1415z
Launch site: Plesetsk Missile and Space Complex, Russia

Status: Telemetry only

Current Mode: 9600 baud data packet

Mode U packet
Downlink: 436.675 MHz 9k6 BPS

Quakesat webpage:
http://www.quakefinder.com/services/quakesat-ssite/
[02252011]
&#65533;&#65533;CO-55 Cute-1.7+APD II
Catalog Number: 27844
Launch date: June 30, 2003 1415z
Launch site: Plesetsk Missile and Space Complex, Russia

Status: Operational

Current Mode: CW downlink worldwide
AX25 Packet with uplink command over Japan only

Mode U Telemetry
Downlink: 437.4000 MHz AFSK 1200 BPS

Mode U TLM Beacon
Downlink: 436.8375 MHz CW

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satIDi&retURL
&#65533;atellites/status.php

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnumx
[02092011]
&#65533;&#65533;NO-44 PCSAT
Catalog number: 26931
Launch Date: September 30, 2001 0240z
Launch site: Kodiak Launch Complex, Alaska, USA

Status: Telemetry only

Current Mode: V/v

General Usage Uplink/Downlink: 145.827 MHz 1200 Baud
Special Usage Downlink: 144.390 Mhz 1200 Baud

PCSAT APRS page: http://pcsat.aprs.org

aprstlm Telemetry Decoder program:
http://www.xciv.org/~iain/aprstlm/v1.2/
[02092011]
��RS-22 RADIO SPORT 22 (MOZHAYETS 4)
Catalog number: 27939
Launch Date: September 27, 2003 0612z
Launch site: Plesetsk Missile and Space Complex, Russia

Status: Operational - 70cm cw only

Current Mode: /u

CW Beacon - 435.352 MHz
145.818 MHz

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satIDv&retURL
�atellites/status.php
[02092011]
��LO-19 LUSAT
Catalog number: 20442
Launch date: January 22, 1990
Launch site: Kourou, French Guiana

Status: CW Beacon only

Uplinks: 145.840 MHz 1200-baud Manchester FSK
145.860 MHz 1200-baud Manchester FSK
145.880 MHz 1200-baud Manchester FSK
145.900 MHz 1200-baud Manchester FSK

CW downlink: 437.125 MHz

Digital downlink: 437.150 MHz SSB (RC-BPSK 1200-baud PSK)

Broadcast Callsign: LUSAT-11
BBS: LUSAT-12

General information and telemetry samples can be found at:
www.telecable.es/personales/ea1bcu
[02092011]
��UO-11 OSCAR-11
Catalog number: 14781
Launch Date: March 1, 1984
Launch site: Vandenburg AFB, California, USA

Status: Operational ?

Current Mode: /v

Telemetry Downlink: 145.825 MHz FM 1200 AFSK
UHFBeacon: 435.025 MHz
Mode-S Beacon: 2401.500 MHz

Mode and Antenna Polarization:
V: RHCP
S: LHCP

Webpage: http://www.users.zetnet.co.uk/clivew/
MPEG3 files: http://www.ne.jp/asahi/hamradio/je9pel/uo11tlme.htm
[07052011]
��INTERNATIONAL SPACE STATION (ISS) - ARISS
Catalog number: 25544
Launch date: November 20, 1998 0640z (ZARYA module)
Launch sites: Baikonur, Kazakhstan
Kourou, French Guiana
Uchinoura Space Center, Japan
Kennedy Space Center, Titusville, Florida, USA

Status: Operational

Current Active Modes: FM Repeater - OFF
Voice - V/v
BBS - OFF
2m APRS - ON
70cm Digi - ON
SSTV - OFF

Expedition 30 Crew (November 2011 - July 2012):
Commander: Dan Burbank KC5ZSX
Flight Engineer: Anton Shkaplerov
Flight Engineer: Anatoly Ivanishin
Flight Engineer: Oleg Kononenko RN3DX
Flight Engineer: Andr� Kuipers PI9ISS
Flight Engineer: Don Pettit KD5MDT

Available Modes and Frequencies:
Digital/APRS:
Worldwide 2m packet uplink: 145.825 MHz FM 1k2
Worldwide 2m packet downlink: 145.825 Mhz FM 1k2
Worldwide 70cm packet downlink: 437.550 Mhz FM 1k2
Worldwide 70cm packet downlink: 437.550 Mhz FM 1k2

Voice:
Region 1 voice uplink: 145.200 MHz FM
Region 2/3 voice uplink: 144.490 MHz FM
Worldwide downlink: 145.800 MHz FM

Crossband Repeater:
Repeater Uplinks: 1269.650 MHz FM
437.800 MHz FM
145.990 MHz FM - 67.0 PL (Kenwood)
Repeater Downlink: 145.800 MHz FM
437.800 MHz FM (Kenwood)

SSTV Robot 36:
Downlink: 145.800 MHz FM

Mode and Antenna Polarization:
V: Linear
U: Linear

Callsigns:
Belgian: OR4ISS
German: DP0ISS
Russian: RS0ISS
RZ3DZR
United States: NA1SS
2m Packet Mailbox: RS0ISS-11
2m Digipeater alias: ARISS
70cm Packet Mailbox: RS0ISS-1
70cm Digipeater callsign: RS0ISS
70cm Digipeater alias: ARISS

Official ARISS Webpage: http://www.rac.ca/ariss
ISS Fan Club Webpage: http://www.issfanclub.com
APRS tracking page: http://www.ariss.net/

ISS Daily Crew Schedule: http://spaceflight.nasa.gov/station/timelines
Remember that the crew operates on UTC time. Also, all of the time
line is NOT translated from Russian and posted.
[03302012]
NNNN
/EX

SB SAT @ AMSAT W8ISS $WSR-090.S3
WSR 090 Part 3 03/30/2012

AMSAT NEWS SERVICE BULLETIN 090.S3
FROM AMSAT HQ SILVER SPRING, MD, March 30, 2012
TO ALL RADIO AMATEURS
BID: $WSR-090.S3

THE FOLLOWING ARE IN ORBIT BUT ARE NON-OPERATIONAL AT THIS TIME:

NANOSAIL-D
Catalog Number: 37361(?)
Ejection Date: January 17, 2011

Status: On orbit

Downlink: 437.270 MHz AX.25

URL: http://nanosaild.engr.scu.edu/dashboard.htm

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum5
[01052012]
��HO-68 HOPE-1 (CAS-1)(XW-1)
Catalog Number: 36122
Launch Date: December 15, 2009 0231z
Launch site: Taiyuan Space Center, PRC

Status: Non - Operational

Callsign:
Broadcast: BJ1SA-11
BBS: BJ1SA-12

Uplinks: 145.8250 MHz FM, PL 67.0 Hz.
145.9250 - 145.9750 MHz SSB/CW
145.8250 MHz AFSK 1200 BPS
Downlinks: 435.6750 MHz FM
435.7650 - 435.7150 MHz SSB/CW
435.6750 MHz AFSK 1200 BPS

Beacon: 435.7900 MHz CW

Mode and Antenna Polarization:
V: LHCP 2.0dBi max
U: RHCP 3.0dBi max

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum8

For more information about XW-1 (CAS-1):
http://
[01122012]
��SO-67 SumbandilaSat
Catalog Number: 35870
Launch Date: September 17, 2009 1555z
Launch site: Baikonur, Kazakhstan

Status: Non - Operational

Callsign: ZS0SUM

Uplink: 145.875MHz FM tone 233.6 Hz
Downlink: 435.345MHz FM

Mode and Antenna Polarization:
V: Linear
U: Linear

For more information about SO-67:
http://www.amsatsa.org.za/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum�
[01272012]
��CP4
Catalog Number: 31132
Launch Date: April 17, 2007

Status: Non-Operational

Current Mode: /u

TLM Downlink: 437.325 MHz 1200 bps FSK AX.25
CW Beacon: 437.325 MHz CW

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnumy
[09062010]
��LIBERTAD-1
Catalog Number: 31128
Launch Date: April 17, 2007

Status: Non-Operational

Current Mode: V/u APRS Packet ax25

Callsign: 5K3L

Uplink: 145.825 MHz 1200 AFSK ax25 APRS
Downlink: 437.399 MHz 1200 AFSK ax25 APRS

Telemetry Beacon: 437.4050 MHz 1200 AFSK ax25

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnumv
[09062010]
��PO-63 PEHUENSAT-1
Catalog Number: 29712
Launch Date: January 10, 2007

Status: Non-Operational

Current Mode: V/v

Uplink/Downlink: 145.825 Mhz FM
Voice Recorder: 145.825 Mhz FM

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnumQ
[09062010]
��NCUBE-2
Catalog number: 28897
Launch Date: October 27, 2005

Status: Still attached to XO-53 (SSETI)?

Proposed Callsign: TBA
Proposed Transmit Frequency: 437.305
2407.250

Official Website: http://www.ncube.no

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum$
[09062010]
��XO-53 SSETI
Catalog number: 28894

Launch Date: October 27, 2005

Status: Non-operational

Voice Uplink: 437.250 MHz FM 67Hz CTCSS
Voice Downlink: 2401.835 MHz FM
Packet Up/Downlink: 437.250 MHz 9k6 packet
Packet Downlink 2401.835 MHz 38k4 packet

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnumT
[09062010]
��UWE-1
Catalog Number: 28892
Launch Date: October 27, 2005

Status: Non-Operational

Mode U Telemetry
Downlink: 437.5050 MHz 9600 AFSK

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnumS
[09062010]
��AO-51 ECHO
Catalog number: 28375
Launch date: June 29, 2004 0745z
Launch site: Baikonur, Kazakhstan

Status: Non - Operational

Current Mode(s):
Voice repeater: V/u
Uplink: 145.880 MHz FM
Downlink: 435.150 MHz FM

Telemetry: Recovery efforts
Downlink: 435.150MHz 9k6

Analog voice downlink: 435.300 MHz FM
435.150 MHz FM
2401.200 Mhz FM
Analog voice uplink: 145.860 MHZ FM
145.880 MHz USB
145.880 MHz FM
145.920 MHz FM
145.920 MHz FM - 67 Hz PL tone burst
1268.705 MHz FM
Digital Downlinks: 435.150 MHz FM 38k4 PBP, 1 watt output
435.150 MHz FM 9k6 Pacsat Broadcast Protocol
2401.200 MHz FM 38k4 bps, AX.25
Digital Uplink: 145.860 MHz FM 9k6 Pacsat Broadcast Protocol
1268.703 mhz FM 9k6 Pacsat Broadcast Protocol

Beacon: 435.150 MHz

Mode and Antenna Polarization:
T: Linear
V: Linear
U: TX A (usually digital)LHCP
TX B (usually analog) RHCP
L: Linear
S: Linear

Broadcast: PECHO-11
BBS: PECHO-12

Official Webpage: http://www.amsat.org/amsat-new/echo/CTNews.php

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum
[12062011]
��CANX-1
Catalog Number: 27847
Launch Date: June 30, 2003

Status: Non-Operational

Downlink: 437.8800 MHz AFSK 1k2bps
[06052009]
��DTUSAT
Catalog Number: 27842
Launch Date: June 30, 2003

Status: Non-Operational

Current Mode: 2k4 AFSK Packet last reported

Downlink: 437.475MHz

Officail webpage: http://dtusat1.dtusat.dtu.dk/

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID1&retURL
�tellites/all_oscars.php
[02212009]
��AO-49 AATiS OSCAR-49 (SAFIR-M)
Catalog number: 27605
Launch Date: December 20, 2002

Status: Non-operational.

Uplink: 435.275 MHz 1200-baud AFSK
Downlink: 145.825 MHz 9600-baud FSK
(optional voice message)

Broadcast callsign: DP0AIS

Official webpage: http://amend.gmxhome.de
[01222007]
��MO-46 TIUNGSAT-1
Catalog number: 26548
Launch date: September 26, 2000

Status: Telemetry only

Uplinks: 145.850 MHz
145.925 MHz 9600-baud FSK
Downlink: 437.325 MHz

Broadcast callsign: MYSAT3-11
BBS: MYSAT3-12

TiungSat-1 is Malaysia's first micro-satellite and in addition to
commercial land and weather imaging payloads offers FM and FSK
Amateur Radio communication.

TiungSat-1, named after the mynah bird of Malaysia, was developed as
a collaborative effort between the Malaysian government and Surrey
Satellite Technology Ltd.
[03302009]
��NO-45 SAPPHIRE
Catalog number: 26932
Launch Date: September 30, 2001

Status: Non-Operational

Downlink: 437.095 MHz 1200 baud AX-25 AFSK
Uplink: 145.945 MHz UI Digipeater
Digi Callsign: KE6QMD

Everyone is welcome to use the digipeating/APRS features of Sapphire,
as per the user service agreement located at the following URL:
http://web.usna.navy.mil/~bruninga/pcsat/contract.txt
[03132005]
��SO-42 SAUDISAT-1B
Catalog number: 26549
Launch date: September 26, 2000

Status: Non-Operational

Downlink: 437.075 MHz

Broadcast Callsign: SASAT2-11
BBS: SASAT2-12

Further information is available at:
http://www.amsat.org/amsat/sats/n7hpr/so42.html
[01222007]
��SO-41 SAUDISAT-1A
Catalog number: 26545
Launch Date: September 26, 2000

Status: Non-Operational

Uplink: 145.850 MHz
Downlink: 436.775 MHz

Broadcast Callsign: SASAT1-11
BBS: SASAT1-12

Further information is available at:
http://www.amsat.org/amsat/sats/n7hpr/so41.html
[01222007]
��AO-40 AMSAT OSCAR 40
Catalog number: 26609
Launch Date: November 16, 2000

Status: Non-Operational

Uplinks

V-band: 145.840 - 145.990 MHz CW/LSB
U-band: 435.550 - 435.800 MHz CW/LSB
L1-band: 1269.250 - 1269.500 MHz CW/LSB
L2-band: 1268.325 - 1268.575 MHz CW/LSB

Downlinks

S2-band: 2401.225 - 2401.475 MHz CW/USB
K-band: 24048.010 - 24048.060 MHz CW/USB
Beacon: 2401.323 MHz
24048.035 MHz

P3-D Telemetry Beacons (IHU)

BEACON General Beacon(GB) Middle Beacon(MB) Engineering Beacon(EB)
2 m none 145.898 MHz none
70cm 435.438 MHz 435.588 MHz 435.838 MHz
13cm(1) 2400.188 MHz 2400.338 MHz 2400.588 MHz
13cm(2) 2401.173 MHz 2401.323 MHz 2401.573 MHz
3cm 10450.975 MHz 10451.125 MHz 10451.375 MHz
1.5cm 24047.885 MHz 24048.035 MHz 24048.285 MHz
[07162007]
��OO-38 OPAL
Catalog Number: 26063
Launch Date: January 27, 2000

Status: Non-Operational

Mode U TLM Beacon
Downlink: 437.1000 MHz 9600 FSK
[08132007]
��UO-36 UoSAT-12
Catalog number: 25693
Launch date: April 21, 1999

Status: Unknown

Uplink: 145.960 MHz (9600-baud FSK)
Downlinks: 437.025 MHz
437.400 MHz

Broadcast Callsign: UO121-11
BBS: UO121-12

The VK5HI viewer shareware for UO-36 is available on the AMSAT-NA web
site at the following URL:
ftp://ftp.amsat.org/amsat/software/win32/display/ccddsp97-119.zip
[01222007]
��SO-35 SUNSAT
Catalog Number: 25636
Launch date:February 23, 1999

Status: Non-Operational

Downlink: Mode B Repeater: 436.291 MHz
Mode J Digipeater: 436.250 MHz

Uplinks: Mode B Repeater: 145.825 MHz
Mode J Digipeater: 145.825 MHz
145.900 MHz

For more information of SUNSAT vist the satellite web site:
http://esl.ee.sun.ac.za/projects/sunsat/
[01222007]
��PO-34 PANSAT
Catalog number: 25520
Launch date: October 30, 1998

Status: Telemetry downloads only

Uplink/downlink: 436.500 MHz

Official Webpage: http://www.sp.nps.navy.mil/pansat/
[05092004]
��SO-33 SEDSAT-1
Catalog number: 25509
Launch date: October 24, 1998

Status: Semi-operational

Downlink: 437.910 MHz FM (9600-baud FSK)

The satellite is not currently available for uplink transmissions and
the image and transponder recovery efforts have been unsuccessful.

For more information on SedSat-1 visit the satellite web site:
http://seds.uah.edu/projects/sedsat/sedsat.htm
[09042006]
��GO-32 Gurwin TechSat-1B
Catalog number: 25397

Launch Date: July 10, 1998

Status: Non-Operational

Current Modes:
Telemetry : /u

Downlink: 435.225 MHz FM (9600-baud FSK)
435.325 Mhz - Not Available - temperature problems
Uplinks: 145.850 FM
145.890 FM
145.930 FM
1269.700 FM
1269.800 FM
1269.900 FM

Broadcast Callsign: 4XTECH-11
BBS Callsign: 4XTECH-12

More information of GO-32 can be found at:
http://asri.technion.ac.il/techsat/

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID&retURL
�atellites/status.php
[07172010]
��TO-31 TMSAT-1
Catalog number: 25396
Launch Date: July 10, 1998

Status: Non-operational

Uplink: 145.925 MHz 9600 baud FSK
Downlink: 436.925 MHz 9600 baud FSK

Broadcast callsign: TMSAT1-11
BBS: TMSAT1-12
[05012006]
��MO-30 UNAMSAT-2
Catalog Number: 24305
Launch Date: September 5, 1996

Status: Non-operational

Downlink: 435.1380 MHz AFSK 1200 BPS
Downlink: 435.2060 MHz AFSK 1200 BPS
Uplink: 145.8150 MHz AFSK 1200 BPS
Uplink: 145.8350 MHz AFSK 1200 BPS
Uplink: 145.8550 MHz AFSK 1200 BPS
Uplink: 145.8750 MHz AFSK 1200 BPS
[06042009]
��PO-28 POSAT-1
Catalog number: 22829

Launch Date: September 25, 1993

Status: Non-operational

Downlink: 429.950
Uplink: Not until handover back to Amatuer usage

Broadcast callsign: POSAT1-11
BBS callsign: POSAT1-12

AMSAT Webpage: http://www.amsat.org/amsat/sats/n7hpr/po28.html
POSAT-1 webpage:
http://www.ee.surrey.ac.uk/SSC/CSER/UOSAT/missions/posat1.html
[01012009]
��IO-26 ITAMSAT
Catalog number: 22826
Launch Date: September 26, 1993

Status: PSK carrier only

Current Mode:

Uplinks: 145.875 MHz FM 1200-baud
145.900 MHz FM 1200-baud
145.925 MHz FM 1200-baud
145.950 MHz FM 1200-baud

Downlink: 435.808 MHz PSK

Broadcast Callsign: ITMSAT-11
BBS: ITMSAT-12

Official webpage: http://www.itamsat.org
AMSAT Webpage: http://www.amsat.org/amsat/sats/n7hpr/io26.html
[01212007]
��KO-25 KITSAT
Catalog number: 22828
Launch date: September 26, 1993

Status: Non-operational

Uplink: 145.980 MHz FM 9600-baud FSK
Downlink: 436.500 MHz FM

Broadcast Callsign: HL02-11
BBS: HL02-12
[05092004]
��AO-24 ARSENE
Catalog Number: 22654
Launch Date: May 13, 1993

Status: Non-operational

Uplink: 435.0625 MHz FM 1k2bps AFSK
435.1125 MHz FM 1k2bps AFSK
435.1375 MHz FM 1k2bps AFSK
Downlink: 145.9750 MHz FM 1k2bps AFSK
2446.5025 MHz FM 1k2bps AFSK

Beacon: 2446.4700 MHz CW

Broadcast callsign:
BBS:
[12162009]
��KO-23 KITSAT
Catalog number: 22077
Launch date: August 10, 1992

Status: Non-operational

Uplink: 145.900 MHz FM (9600-baud FSK)
Downlink: 435.170 MHz FM

Broadcast Callsign: HLO1-11
BBS: HLO1-12
[01222007]
��UO-22 UOSAT
Catalog number: 21575
Launch date: July 17, 1991

Status: Non-Operational

Uplink: 145.900 FM 9600-baud FSK
Downlink: 435.120 MHz FM

Broadcast Callsign: UOSAT5-11
BBS: UOSAT5-12
[01222007]
��AO-21 AMSAT-OSCAR 21
Catalog Number: 21087
Launch Date: January 29, 1991

Status: Non-Operational

Uplink: 435.041 MHz FM DSP
Downlink: 145.983 MHz FM DSP
[01222007]
��FO-20 JAS-1b
Catalog number: 20480
Launch Date: February 07, 1990

Status: Non-Operational

Beacons: 435.795 MHz CW
435.910 MHz AX25

Voice Transponder:
Uplink: 145.900 to 146.000 MHz CW/LSB

Downlink: 435.800 to 435.900 MHz CW/USB

Digital Transponder:
Uplinks: 145.850 MHz
145.870 MHz
145.890 MHz
145.910 MHz
Downlink: 435.910 MHz

More FO-20 info can be found at:
http://www.amsat.org/amsat/sats/n7hpr/fo20.html
[01152007]
��WO-18 WEBERSAT
Catalog Number: 20441
Launch Date: January 22, 1990

Status: Non-Operational

Downlink: 437.104 MHz SSB 1200 Baud PSK AX.25
[05012006]
��DO-17 Dove
Catalog Number: 20440
Launch Date: January 22, 1990

Status: Non-operational.

Downlink: 145.825 MHz FM 1200 Baud AFSK
Beacon: 2401.220 MHz
[05012006]
��AO-16 PACSAT
Catalog number: 20439
Launch Date: January 22, 1990

Status: non-operational

Current Mode: V/u

Uplink: 145.900 MHz FM 1200-baud Manchester FSK (reserved)
145.920 MHz FM VOICE
145.940 MHz FM 1200-baud Manchester FSK (reserved)
145.960 MHz FM 1200-baud Manchester FSK (reserved)

Downlink: 437.026 MHz USB VOICE
(1200-baud PSK - MBL Telemetry Only)

Mode-S Beacon: 2401.1428 MHz [NO FUTURE OPERATIONS PLANNED]

Mode and Antenna Polarization:
U: RC 437.050 MHz RHCP
PSK 437.026 MHz LHCP
V: Linear

Broadcast Callsign: PACSAT-11
BBS: PACSAT-12

AO-16 AMSAT Webpage: http://www.amsat.org/amsat/sats/n7hpr/ao16.html
[07242009]
��UO-15 UoSAT-4
Catalog Number: 20438
Launch Date: January 22, 1990

Status: Non-operational

Uplink: ?
Downlink: 435.1250MHz (?)
435.1200MHz (?)
[06042009]
��UO-14 UoSAT-3
Catalog number: 20437
Launch date: January 22, 1990

Status: Non-operational

Uplink: 145.975 MHz FM
Downlink: 435.070 MHz FM
[05092004]
��FO-12 Fuji-OSCAR 12
Catalog Number: 16909
Launch Date: August 12, 1986

Status: Non-Operational

Mode V/U (J) Linear Transponder (Inverting):
Uplink: 145.9000 - 146.0000 MHz SSB/CW
Downlink 435.8000 - 435.9000 MHz SSB/CW

Mode V/U (J) Packet:
Uplink: 145.8500 MHz MFSK 1200 BPS
Uplink: 145.8700 MHz MFSK 1200 BPS
Uplink: 145.8900 MHz MFSK 1200 BPS
Uplink: 145.9100 MHz MFSK 1200 BPS

Downlink 435.9100 MHz PSK 1200 BPS

Telemetry Beacon: 435.7950 MHz SSB/CW
[01152007]
��AO-10 OSCAR 10
Catalog number: 14129
Launch Date: June 16, 1983

Status: Non-operational

Uplink: 435.030 to 435.180 MHz CW/LSB
Downlink: 145.975 to 145.825 MHz CW/USB

Beacon: 145.810 MHz (unmodulated carrier)

W4SM has more information about the satellite at the following URL:
http://www.cstone.net/~w4sm/AO-10.html
[05092004]

��AO-8 AMSAT-OSCAR 8
Catalog Number: 10703
Launch Date: March 3, 1978

Status: Non-Operational

Mode V/U (J) Linear Transponder (Non-Inverting): Non-Operational
Uplink: 145.9000 - 146.0000 MHz SSB/CW
Downlink 435.1990 - 435.2000 MHz SSB/CW

Mode V/U (J) TLM Beacon: Non-Operational
Downlink 435.0950 MHz CW

Mode V/A (A) Linear Transponder (Non-Inverting): Non-Operational
Uplink: 145.8500 - 145.9000 MHz SSB/CW
Downlink 29.4000 - 29.5000 MHz SSB/CW

Mode V/A (A) TLM Beacon: Non-Operational
Downlink 29.4020 MHz CW
[01152007]
��AO-6 AMSAT-OSCAR 6
Catalog Number: 06236
Launch Date: October 15, 1972

Status: Non-Operational

Uplink: 145.9000 - 146.0000 MHz SSB/CW
Downlink: 29.4500 - 29.5500 MHz SSB/CW
Beacons: 29.450 MHz
435.100 MHz
[01312008]
��AO-5 Australis-OSCAR 5
Catalog Number: 04321
Launch Date: January 23, 1970

Status: Non-Operational

Telemetry Beacons: 144.0500 MHz CW
29.4500 MHz CW
[01152007]
��OSCAR III
Catalog Number: 01293
Launch Date: March 09, 1965

Status: Non-Operational

Uplink: 145.9750 - 146.0250 MHz SSB/CW
Downlink: 144.3250 - 144.3750 MHz SSB/CW
[01012007]
��RS-15 RADIO SPORT RS-15
Catalog number: 23439
Launch Date: December 26, 1994

Status: Non-operational

Uplink: 145.858 to 145.898 MHz CW/USB
Downlink: 29.354 to 29.394 MHz CW/USB

Beacon 1: 29.352 MHz (intermittent)
Beacon 2: 29.398 MHz

SSB meeting frequency: 29.380 MHz (unofficial)
[06202004]
��RS-13 RADIO SPORT RS-13
Catalog number: 21089
Launch date: February 5, 1991

Status: Non-operational

Uplink: 21.260 to 21.300 MHz CW/USB
Downlink: 145.860 to 145.900 MHz CW/USB

Beacon: 145.860 MHz

Robot: 145.908 MHz
[05232004]
��RS-12 RADIO SPORT RS-12
Catalog number: 21089
Launch date: February 5, 1991

Status: Non-operational

Uplink: 21.210 to 21.250 MHz CW/USB
Downlink: 29.410 to 29.450 MHz CW/USB

Beacon: 29.408 MHz

Robot: 29.454 MHz
[05232004]
NNNN
/EX

ANS is released worldwide via the AMSAT ANS e-mail reflector and a live radiocast on the AMSAT-NA 20-meter net held each Sunday on 14.282 MHz. Pre-net operations start at 18:00 UTC, with current ANS bulletins transmitted to the eastern U.S. at 19:00 UTC and to the western U.S. at 19:30 UTC.

Information on AMSAT-NA is available at the following URL:
http://www.amsat.org

Mailing address:
AMSAT-NA
850 Sligo Avenue, Suite 600
Silver Spring, Maryland 20910-4703

Voice: 301-589-6062
888-322-6728
FAX: 301-608-3410

Currently, AMSAT-NA supports the following (free) mailing lists:

* AMSAT News Service (ANS)
* General satellite discussion (AMSAT-BB)
* Orbit data (KEPS)
* Manned space missions (SAREX)
* District of Columbia area (AMSAT-DC)
* New England area (AMSAT-NE)
* AMSAT Educational Liaison mailing list (AMSAT-EDU)
* AMSAT K-12 Educational Liaison mailing list (AMSAT-K12)

A daily digest version is available for each list.

To subscribe, or for more list information, visit the following URL:
http://www.amsat.org/mailman/listinfo/ans

In addition to regular membership, AMSAT-NA offers membership in the President's Club. Members of the President's Club, as sustaining donors to AMSAT Project Funds, will be eligible to receive additional benefits. Application forms are available from the AMSAT-NA Office.

This week's Weekly Satellite Report Editor is James French, W8ISS.

ANS is always dedicated to past ANS editor 'BJ' Arts, WT0N, and to the memory of longtime AMSAT supporters Werner Haas, DJ5KQ, Dennis Kitchen, G0FCL and John Branegan GM4IHJ.

Please send any amateur satellite news or reports to: ans-editor{at} amsat.org
NNNN
/EX

55. ANS-092 AMSAT News Service Weekly Bulletins

Newsgroup: rec.radio.amateur.space
Date: 2012-04-01 01:53:36 UTC
From: JoAnne Maenpaa <k9jkm@comcast.net>
Message-ID: <002401cd0faa$39c2ff30$ad48fd90$@net>
Source record: 105
Cross-posted to: rec.radio.amateur.space,rec.radio.info

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AMSAT NEWS SERVICE
ANS-092

ANS is a free, weekly, news and information service of AMSAT North
America, The Radio Amateur Satellite Corporation. ANS reports on the
activities of a worldwide group of Amateur Radio operators who share an
active interest in designing, building, launching and communicating
through analog and digital Amateur Radio satellites.

Please send any amateur satellite news or reports to:
ans-editor@amsat.org

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SB SAT @ AMSAT $ANS-092.01
ANS-092 AMSAT News Service Weekly Bulletins

AMSAT News Service Bulletin 092.01
>From AMSAT HQ SILVER SPRING, MD.
April 1, 2012
To All RADIO AMATEURS
BID: $ANS-092.01

**********************************************************************
* Volunteers are needed to help at the AMSAT booth at Dayton. Gould *
* WA4SXM, is looking for volunteers to help man the AMSAT booth dur- *
* ing the 2012 Hamvention. People are needed all 3 days for 2 hour *
* shifts. Please send the days and times you are available to help *
* as well as how many shifts you are willing to work via e-mail to *
* wa4sxm at amsat.org. *
* Monitor http://www.amsat.org/amsat-new/hamvention/2012/Dayton.php *
* for the latest AMSAT at Dayton news and developments *
**********************************************************************

AMSAT Theme at Dayton 2012: Running with Fox

The 2012 Dayton Hamvention will be held this year on 18 - 20 May 2012.
As has been the case for the many years Hamvention will be at the Hara
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Arena Complex on the north side of Dayton. AMSAT will occupy the same booths (444-449) in Ball Arena, right across from the ARRL area and just inside the door from the Satellite Demonstration area.

The AMSAT theme for 2012 is "Running with Fox". We will have multiple exhibits of the new AMSAT satellite on display.

Visit AMSAT's Dayton Hamvention page for all details on activities:
http://www.amsat.org/amsat-new/hamvention/2012/Dayton.php

Some of the activities will include:

+ Life size Fox models will be on display as well as diagrams of the modules inside the 10cm square satellite.

+ Operational prototype of ARISSat-1 on display.

+ AMSAT Thursday Night Get-together at the Tickets Pub & Eatery.

+ The sixth annual AMSAT/TAPR Banquet will be Friday night May 18 at the Kohler Banquet Center. The price for the Banquet is $30. Seating is limited and reservations are required. Follow the links on AMSAT's Dayton page.

+ The AMSAT Forum will be on Saturday May 19.

AMSAT/TAPR Friday Night Banquet

AMSAT/TAPR Banquet on Friday night, May 18 is one of the main AMSAT activities during the 2012 Hamvention at Dayton.

AMSAT is pleased to announce that Howard Long, G6LVB will be the featured speaker for the evening event. Howard will be talking about his FUNcube Dongle, the 64 - 1700 MHz Software Defined Receiver. This innovative USB device is the size of a thumbdrive and has an SMA antenna socket. Multiple SDR control and display software programs can be used with the FUNcube Dongle.

Banquet tickets will not be sold at the AMSAT booth during the Hamvention so reservations must be made through the AMSAT Store:
http://www.amsat-na.com/store/item.php?id0158
Tickets are $30 apiece.

ARISS Mentor Introduction at Dayton 2012

AMSAT and ARRL are teaming up during the 2012 Hamvention to recruit new ARISS (Amateur Radio on the International Space Station) Technical Mentors and Ground Station Operators.

Friday and Saturday (May 18 & 19) at 4pm in the ARRL stage area AMSAT Vice President for Educational Relations Mark Hammond N8MH will explain the need for additional ARISS Technical Mentors and Ground Station Operators and the requirements and responsibilities needed to help provide a reliable conversation between astronauts

and selected schools or groups.

Technical Mentors serve as an advising and coordinating liaison between NASA, the school or group making the ARISS contact, and the Ground Station Operators, who set up the satellite station at the contact location. We encourage anyone interested in helping make future school contacts with the ISS successful to please attend.

AMSAT to Facilitate Student Satellite Contacts

AMSAT is encouraging all students attending the 2012 Dayton Hamvention to come by the Satellite Demonstration Area just outside of the Ball Area entrance and make a contact using the amateur satellites. There will be AMSAT volunteers there to explain how to make the contacts and during actual satellite passes will try to get as many students as possible to complete actual contacts. There are lists of satellite pass times in the satellite demonstration area and at the AMSAT booth.

[ANS thanks Gould Smith, WA4SXM for the above information]

AMSAT-NA Board of Directors Nominations

It is time to submit nominations for the upcoming open seats on the AMSAT-NA Board of Directors. A valid nomination requires either one current Member Society, or five current individual members in good standing, to nominate an AMSAT-NA member for the position.

Three directors and two alternate directors have terms expiring this year. The director seats open for election are held by Tom Clark, K3IO; Lou McFadin, W5DID; and Gould Smith, WA4SXM. The alternate director seats open for election are held by Mark Hammond, N8MH and Patrick Stoddard, WD9EWK.

The three nominees receiving the highest number of votes will be seated as regular board members with two year terms. The two nominees receiving the next highest number of votes will be seated as alternate directors for one year.

Written nominations, consisting of names, calls and individual signatures, should be mailed to: AMSAT-NA, 850 Sligo Ave #600, Silver Spring, MD, 20910. They must be received no later than June 15th. No other action is required.

Nominations may also be made by electronic means including e-mail, FAX, or electronic image of a petition. Electronic petitions should be sent to MARTHA@AMSAT.ORG or faxed to 301-608-3410, and also must be received by June 15th. If using any electronic submission, there is a second, verifying step:

ELECTRONIC SUBMISSIONS WITHOUT THIS SECOND, WRITTEN VERIFICATION ARE NOT VALID UNDER THE EXISTING AMSAT-NA BYLAWS. A verifying traditional written petition MUST be received at the AMSAT-NA

office at the above address within 7 days following the close
of nominations.

[ANS Thanks AMSAT Secretary Alan Biddle, WA4SCA for the above
information]

QB50 CubeSat Proposal Deadline Extended to April 30

QB50 is a network 50 CubeSats in a 'string-of-pearls' configuration
that will be launched together in the first half of 2015 by a single
rocket, a Shtil-2.1, from Murmansk, Northern Russia into a circular
320 km altitude, 79 degree inclination orbit. (https://www.qb50.eu)
The mission lifetime of individual CubeSats is estimated to be about
three months.

The von Karman Institute for Fluid Dynamics in Brussels, Belgium is
accepting CubeSat proposals from interested University and Research
teams until April 30. The selection of 50 CubeSats for the explora-
tion of the lower thermosphere, re-entry research and in-orbit demo-
nstration of new technologies and miniaturized science sensors will
be made by the Selection Committee in early June. Proposing teams
will be individually notified of their selection/non-selection short-
ly thereafter.

The 50 CubeSats will comprise an on-orbit network of:

+ About 40 atmospheric 2U CubeSats
+ About 10 2U or 3U CubeSats for In-Orbit Demonstration of science
and technology payloads.

All 40 atmospheric 2U CubeSats and most of the 10 2U and 3U CubeSats
for In-Orbit Demonstration will carry a set of standardized sensors
for multi-point, in-situ, long-duration measurements of key para-
meters and constituents in the largely unexplored lower thermosphere
and ionosphere. Once requirements for the standardized sensor pack-
age and network/communication requirements have been met the Cube-
Sat team may use remaining on-board space or electronic capability
to conduct their own additional research.

QB50 will also study the re-entry process by measuring a number of
key parameters during re-entry, e.g. CubeSat on-board temperature
and deceleration.

A single CubeSat is simply too small to also carry sensors for sig-
nificant scientific research. Hence, for the universities the main
objective of developing, launching and operating a CubeSat is educa-
tional. However, when combining a large number of CubeSats with iden-
tical sensors launched at the same time into a network, in addition
to the educational value, fundamental scientific questions can be
addressed which are inaccessible otherwise.

Networks of CubeSats have been under discussion in the CubeSat community for several years, but so far no university, institution or space agency has taken the initiative to set up and coordinate such a powerful network. The QB50 network can still fully achieve its mission objectives even if a few CubeSats fail.

Typically, a university builds a CubeSat and launches it into low Earth orbit. It also builds or already has available a ground station to track the CubeSat and enable uplink/downlink telecommunications.

The period in a low-Earth orbit (about 600 km altitude) is about 90 minutes, but the duration of a satellite pass over the ground station is approximately 10 minutes in the best case to no coverage at all for most of the 16 daily orbits. When supporting only one satellite project the ground station is not in operation 97% of the time. If a mission critical emergency occurs aboard the CubeSat it can be only addressed on single orbits within range of the dedicated ground station.

An international network, the Global Educational Network for Satellite Operations (GENSO), under development may well be set up in time for QB50. It would eventually comprise more than 100 ground stations in different parts of the world, providing a vastly improved uplink and downlink capability for all CubeSats. The international QB50 network in orbit would be the first major user of the international GENSO network on the ground. In case GENSO is not set up in time for QB50, CubeSat teams are encouraged to set up a subset ground station network comprising any number of ground stations.

The QB50 homepage can be accessed at: https://www.qb50.eu

[ANS thanks the QB50 Project for the above information]

SpaceDaily Posts Article Detailing RAX-2 CubeSat Scientific Success

An article posted on SpaceDaily.com gives additional details of the successful RAX-2 CubeSat scientific success. In their Solar Science section, "Researchers take first-ever measurement of auroral turbulence using a nanosatellite radar receiver", is an article further explaining the scientific discovery. Read the full article on-line at: http://tinyurl.com/UniverseToday-RAX2

[Menlo Park CA (SPX) Mar 26, 2012] - Researchers from SRI International and the University of Michigan have taken the first-ever measurement of naturally occurring auroral turbulence recorded using a nanosatellite radar receiver. The research was done with support from the National Science Foundation (NSF) and NASA's Educational Launch of Nanosatellites (ELaNa) Initiative.

The distinctive radar echoes recorded on March 8 were taken with the Radio Aurora Explorer (RAX) CubeSat. The RAX nanosatellite

measured turbulence over Fairbanks, Alaska that was a direct result of a geomagnetic storm triggered by the largest solar flare in the past five years.

The Earth's high latitude ionosphere, a region of the upper atmosphere associated with solar-driven aurora or "northern lights," becomes highly unstable when large currents flow during geomagnetic storms. RAX was specifically designed by SRI and the University of Michigan to measure this auroral turbulence from an orbital vantage point inaccessible to traditional ground-based radars.

"The RAX radar echo discovery has convincingly proved that miniature satellites, beyond their role as teaching tools, can provide high caliber measurements for fundamental space weather research," said Therese Moretto Jorgensen, Ph.D., Geospace program director in the Division of Atmospheric and Geospace Sciences at the National Science Foundation.

The project's mission was to use small satellites called CubeSats to remotely explore formation of charged particle filaments created in response to intense electrical currents in space.

These plasma structures, a form of turbulence called field-aligned irregularities (FAIs), can distort communication and navigation signals such as global positioning systems (GPS). During the recent solar flare, RAX measured FAI echoes using the Poker Flat Incoherent Scatter Radar (PFISR), an NSF research radar operated by SRI.

"The recently collected radar echoes allow us to determine the root cause and to possibly predict future disturbances in the auroral ionosphere - disturbances that can severely compromise communication and GPS satellites," said Hasan Bahcivan, Ph.D., a research physicist in SRI's Center for Geospace Studies, and principal investigator of the RAX mission.

A team of University of Michigan students under the direction of James Cutler, Ph.D., an assistant professor in the Aerospace Engineering Department, designed, built, and operated the satellite and gathered the radar echo data.

RAX was the first CubeSat to be selected as part of an NSF program to use small satellites for space weather and atmospheric research. The RAX CubeSat is a three liter satellite weighing three kilograms. It was launched by NASA on October 28, 2011, and has since completed 18 experiments.

[ANS thanks SpaceDaily.com for the above information]

NASA Credits Increasing CubeSat Capability in O/OREOS Mission Success

Launched in November, 2011 NASA's Organism/Organic Exposure to Orbital Stresses (O/OREOS) nanosatellite has successfully carried microorgan-

isms to a high-inclination, low-Earth orbit and monitored the effects of the space environment on their growth and metabolism.

Two populations of the microbe Bacillus subtilis into space. One set of microbes was a naturally occurring strain, and the second was a radiation-resistant mutant strain. The microorganisms were part of the Space Environment Survivability of Live Organisms (SESLO) project, which characterized the growth, activity, health and ability of microorganisms to adapt to the stresses of the space environment including exposure to a total dose rate of radiation nearly 15 times greater than that experienced in the orbit of the International Space Station.

In space, bacterial spores successfully germinated and grew after 14 days in orbit and again after 97 days. In microgravity, the cells generally grew and metabolized more slowly than their counterparts on Earth. Interestingly, the microorganisms grown at 97 days of exposure showed no significant difference in their growth parameters than those grown at 14 days. The study provides insight into how living organisms cope with life beyond our planet.

O/OREOS also carried another set of experiments: the Space Environment Viability of Organics (SEVO), which monitored the stability and changes in four classes of organic molecules during spaceflight.

"The full success of the O/OREOS mission demonstrates convincingly that cubesats can be cost-effective platforms for performing science research and conducting technology demonstrations," said Mary Voytek, senior scientist of NASA's Astrobiology Program at NASA Headquarters, in a statement from NASA.

"The capabilities of cubesats are growing steadily, making them good candidates to operate precursor experiments for missions on larger satellites, the International Space Station, lunar surface exposure facilities, and planetary exploration."

The full story can be accessed on SpaceDaily.com at:
http://tinyurl.com/NASA-OREOS

ARISS Contacts Receive Media Coverage

Media coverage of recent ARISS contacts can viewed on-line. The ARISS contact on March 21 with students at Salem Elementary in Apex, North Carolina had the opportunity to question of astronaut Don Pettit KD5MDT 241 miles (388 km) up and on the other side of the Earth aboard the International Space Station. Tony Hutchison, VK5ZAI provided the telebridge link to the ISS amateur radio station NA1SS.

Local television coverage on WRAL-TV and a report of the contact can viewed on-line at:
http://www.wral.com/weather/blogpost/10904028/

News 14 Channel coverage of the Apex ARISS contact is at:
http://tinyurl.com/news14-ARISS

The News Observer article can be read at:
http://tinyurl.com/newsobserver-ARISS

Listen to an interview with some of the students:
http://www.wcpss.net/podcast/2012_march22_salem/index.mp3

Also on March 21 the Swiss Air Force Museum Clin d'Ailes, located on the Swiss Airforce Base in Payerne, Switzerland, established an ARISS contact with ESA astronaut Andr&#65533; Kuipers, PI9ISS, aboard the International Space Station.

Astronaut Andr&#65533; Kuipers operated with the ISS callsign OR4ISS. This was a direct contact performed by the Amateur radio Club station HB9SPACE, located in the museum. Two videos of this event can be viewed on-line at:
http://www.20min.ch/ro/videotv/?vid$4405&cid0
http://www.20min.ch/ro/videotv/?vid$4395&cid0

Southgate ARC provides detailed coverage of the HB9SPACE event at:
http://tinyurl.com/HB9SPACE-ARISS - and -
http://www.uk.amsat.org/6095

[ANS thanks ARISS, AMSAT-UK and Southgate ARC for the above information]

Satellite Shorts From All Over

+ The ESA&#65533;s Education Office has maintained frequent contacts with the student teams to follow the progress of their satellite operations after the February 13 launch of the Vega rocket delivering seven ESA-sponsored CubeSats into low Earth orbit. The status of the CubeSats is posted at:
http://www.esa.int/SPECIALS/Education/SEM2KRGY50H_0.html
Photos posted at:
http://www.esa.int/SPECIALS/Education/SEM2KRGY50H_1.html

+ Call for Papers - Central States VHF Society 46th Annual Conference, Cedar Rapids, Iowa, July 26-28, 2012. If you would like to contribute a paper, presentation, or poster, please contact Rod Blocksome, K0DAS, CSVHF Conference Program Chairman as soon as possible with the title and a short description. You can reach Rod at k0das@arrl.net or at his callbook address. Their web page for authors can be found at:
http://www.csvhfs.org/2012conference/index.html#

+ The ARISS International monthly teleconference was held on Tuesday, March 20. The HamTV discussion covered the meetings that ESA and NASA are engaging in to ensure coordination of the project. Minutes have been posted: http://ariss.rac.ca/arisstel2012-03-20.htm

+ TAMSAT Project Coordinator, Levent Sasmazel, WW2L posted good news about TAMSAT, Association of Amateur Satellite Technologies in Turkey completion of the Internal Housekeeping Unit processor of their satellite. Photos and a full description are posted on the AMSAT-UK web at: http://www.uk.amsat.org/6085

+ The WebSDR receiver is located at the Astronomical Observatory Department of "Stefan cel Mare" University in Suceava, Romania has added coverage of 437.470 - 437.515 MHz to enable reception of the Romanian amateur radio CubeSat Goliat. The original WebSDR receiver at this site provides coverage of the 3.5 MHz band. Tune in at: http://sdr.opt.ro:8901/ More information about the Goliat CubeSat is posted at: http://www.goliat.ro/

+ Light your fire. AMSAT-UK posted news about the STRaND-1 smart phone amateur radio CubeSat Plasma Propulsion Thruster. This system will be the first propulsive technology to provide very precise attitude control and pointing. Read the full article at: http://www.uk.amsat.org/6039

+ The BBC TV Newsnight show covered Clyde Space and UKube-1 in a recent airing. UKube-1 is a 3U CubeSat being designed and produced by Clyde Space for the UK Space Agency. UKube-1 is the UK's first CubeSat and will fly a total of 6 independent payloads. UKube-1 will carry a set of AMSAT-UK FUNcube boards providing a 435/145 MHz linear transponder and BPSK telemetry beacon. Watch the BBC episode at: http://www.uk.amsat.org/5983

+ Know when to duck ... NASA Jet Propulsion Labs has an on-line tool (with web, telnet, and e-mail interfaces) called the HORIZONS system which can be used to generate ephemerides for solar-system bodies. The Near-Earth Object Human Space Flight Accessible Targets Study (NHATS) and the HORIZONS system will allow prediction of the passage of Near Earth Asteroids. (These are scientific tools but offer a significant learning opportunity for citizen scientists.) Check out http://neo.jpl.nasa.gov/nhats/ - and - http://neo.jpl.nasa.gov/cgi-bin/nhats
HORIZONS access is at: http://ssd.jpl.nasa.gov/?horizons

+ Echolink SATCHAT net control Vince Waelti, K9TSU announced the new schedule of the on-line net. SATCHAT will meet on the AMSAT Server on Echolink 1900-2030 hours CDT (UTC-5) on the first, third, and fifth Saturdays of each month. A few upcoming dates for the net: April 7, April 21, May 5, May 19, June 2, June 16. All interested amateur radio operators are invited to check in.

+ Watch the launch of ESA's ATV Edoardo Amaldi on an Ariane 5 rocket from Europe's Spaceport in Kourou, French Guiana, on March 23: http://www.spaceref.com/news/viewpr.html?pid6517

+ Check out this linked image. All those tiny points of light aren't stars; they're entire galaxies, seen by the European Southern Observatory's VISTA survey telescope located at the Paranal Observ-

atory in Chile. ESO's UltraVISTA survey revealed over 200,000 distant galaxies: http://tinyurl.com/VISTA-galaxies (UniverseToday.com)

+ Using state-of-the-art deep sea sonar, a team says they have found the Apollo 11 engines lying 14,000 feet below the surface. Plans to attempt to raise one or more of them from the ocean floor are under study. It is unkown yet what condition these engines might be in because they hit the ocean at high velocity and have been in salt water for more than 40 years. A short article is posted at: http://nasawatch.com/archives/2012/03/jeff-bezos-to-a.html

+ Yuri's (VE3/UT1FG/MM) ship was the first foreign ship to dock in Toronto for the 2012 shipping season. The event is celebrated in a ceremony and the captain is crowned with a 150 year old Beaver Hat on the ship. Yuri should be in Thunder Bay on April 1st. He expects to be there for several days. The next destination is Puerto Rico. Watch on YouTube: http://tinyurl.com/UT1FG-TorontoHat (via John, K8YSE)

[ANS thanks everyone for the above information]

/EX

In addition to regular membership, AMSAT offers membership in the President's Club. Members of the President's Club, as sustaining donors to AMSAT Project Funds, will be eligible to receive additional benefits. Application forms are available from the AMSAT Office.

Primary and secondary school students are eligible for membership at one-half the standard yearly rate. Post-secondary school students enrolled in at least half time status shall be eligible for the student rate for a maximum of 6 post-secondary years in this status. Contact Martha at the AMSAT Office for additional student membership information. And with that please keep in mind the ham who produced a theatrical performance about puns. Reviews said it was a play on words.

73,
This week's ANS Editor,
JoAnne Maenpaa, K9JKM

56. Crossposting Permitted to rec.radio.amateur.moderated

Newsgroup: rec.radio.amateur.space
Date: 2012-04-01 06:00:02 UTC
From: rram@panix.com
Message-ID: <radio/ham-radio/moderated/crossposting-1-1333260001@panix.com>
Source record: 106
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space,rec.radio.info

```
Posted-By: auto-faq 3.3.2 beta (PGPMoose V2.0, Perl 5.005)
Archive-name: radio/ham-radio/moderated/crossposting
Revision: 1.2 2011/11/02 04:08:53
Posting-Frequency: posted monthly
URL: http://www.panix.com/~rram/usenet/rram/index.html

Changes followed by "|".

After a 30-day public discussion and feedback period to gauge reader
opinions in March of 2009:

http://groups.google.com/group/rec.radio.amateur.moderated/browse_thread/thread/d7d337db35
f23326

the rec.radio.amateur.moderated Moderation Team had decided to consider |
amending its charter, and permit limited simultaneous crossposting to
rec.radio.amateur.moderated and one other unmoderated
amateur-radio-related discussion newsgroup. After a successful trial |
period (90 days, through early July 2009), we decided to adopt this |
change permanently. |

Approved rec.radio.amateur.* newsgroups are those that are currently
listed in the latest version of the "List of Big Eight Newsgroups" which
is crossposted monthly to news.announce.newgroups, news.groups, and
news.lists.misc.

Approved alt.radio.amateur.* and alt.ham-radio.* newsgroups are those
that have been created consistent with the suggestions in "So You Want
to Create an Alt Newsgroup" at:

http://www.faqs.org/faqs/alt-creation-guide/

Approved regional hierarchy newsgroups are those that contain either
"radio.amateur" or "ham-radio" in their names, including
uk.radio.amateur and aus.radio.amateur.misc.

We will make every reasonable effort to keep our list of approved
newsgroups up-to-date. In case we have overlooked any, and a submission
is rejected in error as a result, the rejected submitter can E-mail us
at our administrative contact address (in the signature at the bottom of
this article, and the default Reply-To for the rejection message)
requesting that it be added, and that the article be approved. We may
still choose to reject articles crossposted to any alt.* newsgroup with
an inappropriate name, including obscene language, embedded
name-calling, or encouragement of unlawful conduct.
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Please direct any comments, questions, or criticisms to
rec-radio-amateur-moderated-request@panix.com.

57. Weekly Highlights of Solar and Geomagnetic Activity, 26 March - 01 April 2012

Newsgroup: rec.radio.amateur.space
Date: 2012-04-02 15:30:09 UTC
From: SWPC.Webmaster@noaa.gov
Message-ID: <20120402153001.5A19433C6F@panix2.panix.com>
Source record: 107
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.dx,rec.radio.amateur.space,rec.radio.shortwave,rec.radio.info

```
:Product: Weekly Highlights and Forecasts
:Issued: 2012 Apr 02 1304 UTC
# Prepared by the US Dept. of Commerce, NOAA, Space Weather Prediction Center
# Product description and SWPC contact on the Web
# http://www.swpc.noaa.gov/weekly.html
#
# Weekly Highlights and Forecasts
#
Highlights of Solar and Geomagnetic Activity
26 March - 01 April 2012

Solar activity was at mostly low levels during the period. Region
1451 (N17, L=306, class/area Cro/20 on 30 March), which is thought
to be old Region 1429, produced a C7 x-ray event on 29 March, the
largest event of the period. No other significant flares or
associated CMEs occurred.

No proton events were observed at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit ranged
between normal and moderate levels off and on throughout the period.

Geomagnetic field activity began the period at quiet levels on 26
March and the first half of 27 March. Beginning around 0900 UTC on
27 March, conditions increased to unsettled levels over the next 12
hours, as the result of a sustained period of southward Bz near
-13nT. Shortly prior to 1800 UTC, a transition in polarity (SSBC)
was observed at the onset of weak Coronal Hole (CH) high speed
stream, with the NOAA planetary network of ground magnetometers
recording active levels over the next 9 hours so, ending at 0600 UTC
on 28 March. Individual high latitude stations recorded minor storm
levels simultaneously. From midday 28 March through the end of the
period on 01 April, geomagnetic activity remained at quiet levels.

Forecast of Solar and Geomagnetic Activity
02 April - 28 April 2012

Solar activity is expected to be at very low to low levels
throughout the period with a slight chance for M-class flare
activity.

No proton events are expected at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit is
expected to be at normal to moderate levels from 02 April through 13
April. Flux values are forecast to increase to high levels on 14
```

April and persist through 18 April, as the result of CH high speed stream effects. Flux values are expected to return to normal and moderate levels on 19 April, and remain so through the duration of the period.

Geomagnetic field activity is expected to begin the period at mostly quiet conditions and remain so through 03 April. On 04 April, quiet to unsettled conditions are expected as a small positive polarity CH is expected to move into a favorable position for a day or so. Predominately quiet conditions are expected again from 05 -10 April. On 11 April, high speed stream effects from recurrent negative polarity CH are forecast to bring unsettled and active conditions at mid latitudes and possible minor storm levels at high latitudes. This activity is expected to persist for 3 to 4 days. From 15 April through 23 April, conditions are expected to return to predominately quiet levels. A recurrent positive polarity CH is anticipated on 24 - 25 April, and is expected to increase activity to unsettled conditions. Mostly quiet geomagnetic conditions are expected from 26 April through the end of the period.

58. Radio Meteor Obs. Bull. March 2012

Newsgroup: rec.radio.amateur.space
Date: 2012-04-03 17:20:21 UTC
From: Chris Steyaert <observations@rmob.org>
Message-ID: <d9cmn7h1b3jubh1aetpre0r49qm76uvrrn@4ax.com>
Source record: 108
Cross-posted to: rec.radio.amateur.space,sci.astro.amateur

Radio Meteor Observation Bulletin No. 224 of March 2012 (87 K) is available now as

http://www.rmob.org/rmobtext/rmob1203.txt

More information and the visual presentation of the hourly forward scatter counts can be found on

http://www.rmob.org

Chris

59. Weekly Highlights of Solar and Geomagnetic Activity, 02 - 08 April 2012

Newsgroup: rec.radio.amateur.space
Date: 2012-04-09 15:30:05 UTC
From: SWPC.Webmaster@noaa.gov
Message-ID: <20120409153001.6AE5E33C94@panix2.panix.com>
Source record: 109
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.dx,rec.radio.amateur.space,rec.radio.shortwave,rec.radio.info

```
:Product: Weekly Highlights and Forecasts
:Issued: 2012 Apr 09 1221 UTC
# Prepared by the US Dept. of Commerce, NOAA, Space Weather Prediction Center
# Product description and SWPC contact on the Web
# http://www.swpc.noaa.gov/weekly.html
#
# Weekly Highlights and Forecasts
#
Highlights of Solar and Geomagnetic Activity
02 - 08 April 2012

Solar activity was at very low to low levels. Region 1450 (N16,
L=324, class/area Esi/180 on 06 April) produced 4 C-class flares
including a C1/Sf at 2110 UTC on 05 April with associated Type II
(360 km/s) and Type IV radio sweeps along with a partial halo
coronal mass ejection (CME) first seen in SOHO/LASCO C2 imagery at
05/2125 UTC. Region 1450 also produced several C-class flares from
04 to 05 April; the largest, a C3/1f at 1624 UTC on 05 April. Region
1452 (N18, L=285, class/area Dsi/040 on 04 April) was also
responsible for a C2 flare that occurred at 1708 UTC on 07 April.
Two filament eruptions were observed. The first was a filament
eruption near N26E14 first observed in SOHO/LASCO C2 imagery
beginning at 0224 UTC on 02 April. The CME was partially
Earth-directed; however the majority of the ejecta were northerly.
The second filament eruption occurred between 1825 - 1900 UTC on 07
April in the northwest quadrant near Region 1451 (N17, L=306,
class/area Cro/020 on 30 March). The associated CME had an
approximate plane of sky speed of 690 km/s with the majority of the
ejecta directed southwest of the Earth.

No proton events were observed at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit ranged
between normal and moderate levels.

Geomagnetic field activity was quiet to unsettled during the period,
with the sole exception of a single active period between 09-12 UTC
on 05 April as the result of sustained southward Bz.

Forecast of Solar and Geomagnetic Activity
09 April - 05 May 2012

Solar activity is expected to be at very low to low levels
throughout the period.
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No proton events are expected at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit is expected to be at normal to moderate levels from 09-13 April. Flux values are forecast to increase to high levels from 14-18 April, due to CH high speed stream effects. Values should decrease to normal/moderate levels again for 19 April through 05 May.

Geomagnetic field activity is expected to begin the period at quiet to unsettled levels, and remain so from 09 April through 15 April, due to the combination of two anticipated CME arrivals from filament eruptions as well as anticipated CH effects. Conditions are expected to recover to mostly quiet levels from 16-22 April, before increasing to unsettled levels on 23-24 April. This increase is forecast as the result of an expected recurrent negative polarity coronal hole. Mostly quiet levels are anticipated from 25 April through the end of the period on 05 May.

60. ANS-099 AMSAT News Service Weekly Bulletins

Newsgroup: rec.radio.amateur.space
Date: 2012-04-09 17:52:34 UTC
From: JoAnne Maenpaa <k9jkm@comcast.net>
Message-ID: <000001cd1679$85a77310$90f65930$@net>
Source record: 110
Cross-posted to: rec.radio.amateur.space,rec.radio.info

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AMSAT NEWS SERVICE
ANS-099

ANS is a free, weekly, news and information service of AMSAT North
America,
The
Radio Amateur Satellite Corporation. ANS reports on the activities of a
worldwide group of Amateur Radio operators who share an active interest
in
designing, building, launching and communicating through analog and
digital
Amateur Radio satellites.

Please send any amateur satellite news or reports to:

ans-editor@amsat.org

**********************************************************************
* Volunteers are needed to help at the AMSAT booth at Dayton. Gould *
* WA4SXM, is looking for volunteers to help man the AMSAT booth dur- *
* ing the 2012 Hamvention. People are needed all 3 days for 2 hour *
* shifts. Please send the days and times you are available to help *
* as well as how many shifts you are willing to work via e-mail to *
* wa4sxm at amsat.org. *
* Monitor http://www.amsat.org/amsat-new/hamvention/2012/Dayton.php *
* for the latest AMSAT at Dayton news and developments *
**********************************************************************

In this edition:
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SB SAT @ AMSAT $ANS-099.01
ANS-099 AMSAT News Service Weekly Bulletins

AMSAT News Service Bulletin 099.01
From AMSAT HQ SILVER SPRING, MD.
April 8, 2012
To All RADIO AMATEURS
BID: $ANS-099.01

Fox-1 Project Educational Goals Align With NASA ELaNa Requirements
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Project ELaNa, NASA's "Educational Launch of NanoSat" managed by the Launch Services Program at the Kennedy Space Center, announced on February 10 that the AMSAT Fox-1 cubesat has been selected to join the program. AMSAT will work with NASA in a collaborative agreement where NASA will cover the integration and launch costs of satellites deemed to have merit in support of their strategic and educational goals.

In an article published in the AMSAT Journal, AMSAT Vice-President of Engineering, Tony Monteiro, AA2TX noted that meeting NASA's educational goals for Science, Technology, Engineering, and Math (STEM) was the cornerstone in the successful acceptance of Fox-1 into the ELaNa project.

Fox-1 continues AMSAT's long record of success as an all-volunteer organization providing access to space communications for students in a curriculum setting as well the private citizen.

The Fox-1 communication package provides a learning and techological stepping-stone using commonly available amateur radio equipment. Students gain first-hand experience in setting up and operating equipment, orbital prediction, communication to distant places, and growth in overall space literacy. In the classroom, Fox-1 will allow schools, teachers, and students to actively participate in space technology with a unique experimental hands-on learning approach that includes communicating through a satellite in orbit.

All of the Fox-1 experiment and telemetry data will be collected and stored on our internet server and made publicly available for use in the classroom and shared with the CubeSat community.

In addition to mentoring university student cubesat mission teams, AMSAT satellites have also hosted university experiments aboard our spacecraft. In addition to the communications package, Fox-1 will host an experimental payload developed as a capstone project at Penn State University. The Penn State project will have impact on future CubeSat systems as the students design, construct, and orbit an attitude experiment based on a 3-axis micro-electro-mechanical gyroscope.

Fox-1 Project Reviews

The Fox-1 Team participated in a Merit Review and Feasibility Review with a panel including education and industry experts at the Doctorate level, a developer of 29 satellites, and directors of research.

The results of the Fox-1 Merit Review found:

+ AMSAT "nailed" the NASA education requirements of the NASA Education Strategic Coordination Framework and the NASA Education Implementation Framework. In fact, AMSAT has a history of space education that pre-dates most university programs.

+ The Fox-1 program will be accessible to an entire classroom or school with only the teacher or outside volunteer requiring an

amateur radio license.

+ The archive of telemetry data collected during actual space flight will prove valuable in future educational projects that have yet to be imagined.

The results of the Fox-1 Feasibility Review found:

+ While AMSAT relies on an all-volunteer development team the tremendous depth and experience of the Fox-1 team far exceeds the capability of a typical CubeSat team. AMSAT has developed its satellites this way for 40 years and has never missed a launch.

+ AMSAT does not rely on critical technology for flight and leverages our experience from prior successful missions:

o Fox-1 is designed to operate in sunlight without batteries once the battery system fails. This applies lessons learned from AO-51 and ARISSat-1 operations.

o In case of IHU failure Fox-1 will continue to operate its FM repeater in a basic, 'zombie sat' mode, so that the repeater remains on-the-air.

o Fox-1 is designed as the immediate replacement for AO-51. Its U/V (Mode B) transponder will make it even easier to work with modest equipment.

o From the ground user's perspective, the same FM amateur radio equipment used for AO-51 may be used for Fox-1.

AMSAT's Fox-1 project timeline is based on targeting a launch in the second half of 2013. NASA will determine on which flight each of the Project ELaNa CubeSats fly. They have updated their CubeSat Launch Initiative web page including AMSAT's participation at: http://www.nasa.gov/directorates/heo/home/CubeSats_initiative.html

[ANS thanks the Fox-1 Team for the above information]

AMSAT-NA Board of Directors Nominations

It is time to submit nominations for the upcoming open seats on the AMSAT-NA Board of Directors. A valid nomination requires either one current Member Society, or five current individual members in good standing, to nominate an AMSAT-NA member for the position.

Three directors and two alternate directors have terms expiring this year. The director seats open for election are held by Tom Clark, K3IO; Lou McFadin, W5DID; and Gould Smith, WA4SXM. The alternate director seats open for election are held by Mark Hammond, N8MH and Patrick Stoddard, WD9EWK.

The three nominees receiving the highest number of votes will be seated as regular board members with two year terms. The two nominees receiving the next highest number of votes will be seated as alternate directors for one year.

Written nominations, consisting of names, calls and individual signatures, should be mailed to: AMSAT-NA, 850 Sligo Ave #600, Silver Spring, MD, 20910. They must be received no later than June 15th. No other action is required.

Nominations may also be made by electronic means including e-mail, FAX, or electronic image of a petition. Electronic petitions should be sent to MARTHA@AMSAT.ORG or faxed to 301-608-3410, and also must be received by June 15th. If using any electronic submission, there is a second, verifying step:

ELECTRONIC SUBMISSIONS WITHOUT THIS SECOND, WRITTEN VERIFICATION ARE NOT VALID UNDER THE EXISTING AMSAT-NA BYLAWS. A verifying traditional written petition MUST be received at the AMSAT-NA office at the above address within 7 days following the close of nominations.

[ANS Thanks AMSAT Secretary Alan Biddle, WA4SCA for the above information]

EPFL Announces Nanosat Ion Drive - To The Moon on 100 mL of Fuel

An article posted on space-travel.com reported the EPFL University in Switzerland announced the first prototype of a new, ultra-compact motor that will allow small satellites to journey beyond Earth's orbit. (See: http://tinyurl.com/EPFL-IonMotor)

EPFL said the MicroThrust ion motor will be capable of reaching the Moon using just a tenth of a liter of fuel. The complete thruster weighs just a few hundred grams and is specifically designed to propel small (1-100 kg) satellites, which it enables to change orbit around the Earth and even voyage to more distant destinations - functions typically possible only for large, expensive spacecraft.

Instead of a combustible fuel, the new mini motor runs on an "ionic" liquid, in this case the chemical compound EMI-BF4, which is used as a solvent and an electrolyte. It is composed of electrically charged molecules (like ordinary table salt) called ions, except that this compound is liquid at room temperature. The ions are extracted from the liquid and then ejected by means of an electric field to generate thrust. This is the principle behind the ionic motor: fuel is not burned, it is expelled.

After six months of acceleration, the microsatellite's speed increases from 24,000 km/h, its launch speed, to 42,000 km/h. The acceleration is only about a tenth of a millimeter per square second, which translates into 0-100 km/h in 77 hours. But in space, where there is no

friction to impede motion, gentle but steady acceleration is the way to go.

"We calculated that in order to reach lunar orbit, a 1-kg nanosatellite with our motor would travel for about six months and consume 100 milliliters of fuel," explains Muriel Richard, a scientist in EPFL's Swiss Space Center.

A video about the MicroThrust has been posted at:
http://www.youtube.com/watch?feature&#65533;ayer_embedded&v&#65533;lSI_l5g4M

[ANS thanks Space-Travel.com for the above information]

European ATV-3 Edoardo Amaldi Arrives at ISS & Performs Reboost

After a successful launch on March 23, the heaviest cargo ship ever has arrived and docked to the International Space Station. The 20-ton European ATV-3 cargo ship, named "Edoardo Amaldi" after the Italian physicist and spaceflight pioneer, made a "smooth and gentle" docking on March 28. It delivered 7 tons of food, drinking water, clothing, oxygen, spare parts and fuel for the 6-member ISS crew.

A video of the docking with ISS can be viewed at:
http://www.youtube.com/watch?feature&#65533;ayer_embedded&v&#65533;rM-1F4jdo

On Saturday, March 31 the ATV reboosted the space station's orbit to 389.8 km. The ATV's thrusters ran for 351 seconds, increasing ISS velocity by 1.0 m/s and boosting average altitude by 1.73 km. This is a standard test performed as soon as possible after docking.

The successful test burn means that ATV is ready for a series of larger planned reboosts (the first expected on 5 April) and to conduct debris avoidance manoeuvres when necessary.

Read more on-line at:
http://tinyurl.com/ISS-ATVBoost1 (space-travel.com)
http://tinyurl.com/ISS-ATVBoost2 (space-travel.com)

An article posted on spaceflightnow.com on April 2 reports that the huge cargo freighters, weighing more than 20 tons fully loaded, will stop flying in 2014 when the fifth resupply craft delivers equipment to the International Space Station. ESA member states decided to discontinue the program after briefly considering redesigning the throw away cargo craft to return hardware in a hardened re-entry capsule.
Read the full article on-line at:
http://spaceflightnow.com/news/n1204/02atvfuture/

The ESA published a new video on their youtube channel showing ESA astronaut Andr&#65533; Kuipers and cosmonaut Oleg Kononenko opening the hatch to the ATV and begin unloading the cargo. See:
http://www.youtube.com/watch?feature&#65533;ayer_embedded&v&#65533;RrisDIdqM

[ANS thanks Space-Travel.com and SpaceFlightNow.com for the above information]

California Students Contact ISS Astronaut

The amateur radio club at California Polytechnic State University, San Luis Obispo, California arranged for an Amateur Radio on the International Space Station (ARISS) contact for elementary school students, 4H-club members and Scouts on Tuesday, March 27. The connection was made by telebridge station AH6NM in Hawaii.

Approximately 150 students were in attendance. Local news station KSBY and the Cal Poly newspaper Mustang Daily covered the event; NASA-TV replayed the contact audio on March 28. The ARISS event complemented the science fair held to get students interested in Science, Technology, Engineering and Mathematics (STEM). To view the article, see:
http://mustangdaily.net/radio-club-makes-contact-with-international-space
-
station/

and the news clip:
http://www.ksby.com/videos/cal-poly-connects-with-outer-space/

[ANS thanks Carol, KB3LKI, for the above information]

Satellite Shorts From All Over

+ Education and Technology Program Director Mark Spencer, WA8SME will try to activate W1AW on AO-27 on April 10 for the 1830Z pass. Fastest QSL is via his callbook address.

+ The 50 MHz and Up Group has issued the first call for papers for the 2012 Microwave Update Conference to be held October 18-21 in Santa Clara, California. For more information on submitting papers as well as all other aspects of the conference please go to:
http://www.microwaveupdate.org

+ The International Space Station Benefits for Humanity brochure is a collection of in-depth descriptions about benefits from research on the space station. The benefits outlined serve as examples of the space station's potential as a ground breaking scientific research facility. This collection was developed collaboratively by the members of the Canadian Space Agency, European Space Agency, Japan Aerospace Exploration Agency, NASA and the Russian Federal Space Agency. To view the brochure, visit http://tinyurl.com/NASA-Brochure (nasa.gov)

+ A NASA Educator's Guide about Rockets is available on-line at:
http://tinyurl.com/NASAForEducators (nasa.gov)

+ Bob, WB4APR noted a need for an Australian Amateur Astronomer and HAM operator in Canberra on 4-6 June 2012. Assistance is needed to support a science team of students from the USA to observe the last transit of Venus this century in Canberra. We want a local Australian Ham to be there to see if we can use ham radio and the speed of light to share observations with our sister team in Japan (and any other observation sites). Interested individuals for this historic event, contact WB4APR@amsat.org

+ Tom Medlin, W5KUB, known for his live webcasts from the Dayton Hamvention and Huntsville Hamfest will also broadcast from the Memphis FreeFest on Saturday, April 14 between 0900-1500 CDT (UTC-5). Tom says, "This is a small hamfest but we will have a few prize drawings during the broadcast. All you need to enter the drawing is to be in our chatroom when the drawings are announced." The internet video feed and the chatroom can be found at: http://w5kub.com. This page streams previously recorded video from Dayton when live broadcasts are not airing.

+ The next Hudson Valley Satcom net date is Thursday, April 12 at 8:00 PM EDT (UTC -4) on the 146.970 MHz repeater, and also on the N2EYH-L Echolink node. More info: http://www.hvsatcom.org/ (via Stu, WA2BSS)

[ANS thanks everyone for the above information]

/EX

In addition to regular membership, AMSAT offers membership in the President's Club. Members of the President's Club, as sustaining donors to AMSAT Project Funds, will be eligible to receive additional benefits. Application forms are available from the AMSAT Office.

Primary and secondary school students are eligible for membership at one-half the standard yearly rate. Post-secondary school students enrolled in at least half time status shall be eligible for the student rate for a maximum of 6 post-secondary years in this status. Contact Martha at the AMSAT Office for additional student membership information.

73,
This week's ANS Editor,
Lee McLamb, KU4OS

61. Join the Australasia Satellite Forum 2012

Newsgroup: rec.radio.amateur.space
Date: 2012-04-10 06:48:35 UTC
From: jeremydale.thomposon@gmail.com
Message-ID: <2976661.2137.1334040515116.JavaMail.geo-discussion-forums@pbjk8>
Source record: 111

16 April 2012

The Heritage Room Westin Hotel, Sydney

The annual Australasia Satellite Forum will once again draw satellite leaders from the Australasian region to Sydney for the one-day satellite forum. The forum will promote dialogue between world and domestic leaders in the satellite industry and encourage players in the industry to address, discuss and debate issues, latest technologies and demand in the Australasian region.

NewSat’s CEO, Adrian Ballintine, will join other satellite operators on the Supply v Demand – Shaping Australasia’s satellite footprint panel, discussing

– NBN impact on commercial business

– Industry consolidation and new operators

– Future investment in Australasia by operators and service providers

– Drivers and challenges HDTV/ IPTV/ FTA/ OTT

– Mobility

NewSat’s CTO, David Ball, will moderate The role and capabilities of first responder communications in disaster zones Q&A.

NewSat’s executive team will be attending the forum. If you would like to meet with Adrian, David or the team, send an email at events@newsat.com or call +61 3 9674 4688.

62. NewSat provides Ka-Band Capacity Across the Globe

Newsgroup: rec.radio.amateur.space
Date: 2012-04-12 06:41:10 UTC
From: jeremydale.thomposon@gmail.com
Message-ID: <23352851.66.1334212870672.JavaMail.geo-discussion-forums@pbckz3>
Source record: 112

Ka-band is the next generation of satellite technology. It delivers high intensity spot beams, enabling faster speeds and more cost-effective end-user solutions. As Ku-band supplemented C-band in the ‘90s, Ka-band is the logical successor of Ku-band in the future and will evolve into the delivery mechanism of choice for emerging markets and high demand regions throughout the world.

• Higher bandwidths and speeds – “more bits per hertz”

• Smaller end-user antennas, enabling mobility and rapid deployment

• More cost-effective terminal equipment

• Higher frequencies, enabling frequency re-use

• More efficient support of high bandwidth applications for demanding military, resources and government environments

• Less congested than Ku- and C-band

Learn more about how NewSat's Global Satellite Solutions can help your industry:

http://www.newsat.com/Solutions/solutions.html

63. ANS-106 AMSAT News Service Weekly Bulletins

Newsgroup: rec.radio.amateur.space
Date: 2012-04-15 01:14:16 UTC
From: JoAnne Maenpaa <k9jkm@comcast.net>
Message-ID: <001901cd1aa5$0e12ede0$2a38c9a0$@net>
Source record: 113
Cross-posted to: rec.radio.amateur.space,rec.radio.info

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AMSAT NEWS SERVICE
ANS-106

ANS is a free, weekly, news and information service of AMSAT North
America, The Radio Amateur Satellite Corporation. ANS reports on the
activities of a worldwide group of Amateur Radio operators who share an
active interest in designing, building, launching and communicating
through analog and digital Amateur Radio satellites.

Please send any amateur satellite news or reports to:
ans-editor@amsat.org

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* Volunteers are needed to help at the AMSAT booth at Dayton. Gould *
* WA4SXM, is looking for volunteers to help man the AMSAT booth dur- *
* ing the 2012 Hamvention. People are needed all 3 days for 2 hour *
* shifts. Please send the days and times you are available to help *
* as well as how many shifts you are willing to work via e-mail to *
* wa4sxm at amsat.org. *
* Monitor http://www.amsat.org/amsat-new/hamvention/2012/Dayton.php *
* for the latest AMSAT at Dayton news and developments *
**********************************************************************

In this edition:
* New Features at the AMSAT Booth at Dayton 2012
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SB SAT @ AMSAT $ANS-106.01
ANS-099 AMSAT News Service Weekly Bulletins

AMSAT News Service Bulletin 106.01
>From AMSAT HQ SILVER SPRING, MD.
April 15, 2012
To All RADIO AMATEURS
BID: $ANS-106.01
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New Features at the AMSAT Booth at Dayton 2012

The 2012 Dayton Hamvention, sponsored by the Dayton Amateur Radio Association will be held this year on May 18-20, 2012. AMSAT will occupy the same booths (444-449) in Ball Arena, right across from the ARRL area and just inside the door from the Satellite Demonstration area. Plan to visit all of the AMSAT activities!

The AMSAT booth will feature AMSAT Engineering, new publications, new apparel, amateur satellite hardware and software. The AMSAT Forum will be on Saturday May 19.

All of the latest AMSAT at Dayton information is posted on-line at: http://www.amsat.org/amsat-new/hamvention/2012/Dayton.php

Engineering

We will have an engineering model of the 1U Cubesat Fox, the operational ARISSat prototype, Fox telemetry display and the Penn State student experiment for Fox.

New Publications

2012 Getting Started with Amateur Satellites
2012 Laminated Frequency Card

New Apparel

White golf shirt with AMSAT Fox logo
White baseball cap with AMSAT Fox logo
Tee shirt with Fox satellite design and Fox logo

Hardware

ELK Antennas and optional covers
LVB Tracker boxes

Software

Latest version of SatPC32

If you renew your AMSAT membership at the AMSAT booth you will receive an AMSAT insulated stainless steel coffee mug.

AMSAT Hotel

The cutoff date to book a room with the AMSAT group is April 20. The hotel is the Country Inn and the cost of the room (with 2 Queen Beds) is $99. If you are interested in staying with the AMSAT at Dayton, please call Martha at the AMSAT Office at 301-589-6062.

AMSAT/TAPR Friday Night Banquet

AMSAT/TAPR Banquet on Friday night, May 18 is one of the main AMSAT activities during the 2012 Hamvention at Dayton.

AMSAT is pleased to announce that Howard Long, G6LVB will be the featured speaker for the evening event. Howard will be talking about his FUNcube Dongle, the 64 - 1700 MHz Software Defined Receiver. This innovative USB device is the size of a thumbdrive and has an SMA antenna socket. Multiple SDR control and display software programs can be used with the FUNcube Dongle.

Banquet tickets will not be sold at the AMSAT booth during the Hamvention so reservations must be made through the AMSAT Store:
http://www.amsat-na.com/store/item.php?id0158
Tickets are $30 apiece.

ARISS Mentor Introduction at Dayton 2012

AMSAT and ARRL are teaming up during the 2012 Hamvention to recruit new ARISS (Amateur Radio on the International Space Station) Technical Mentors and Ground Station Operators.

Friday and Saturday (May 18 & 19) at 4pm in the ARRL stage area AMSAT Vice President for Educational Relations Mark Hammond N8MH will explain the need for additional ARISS Technical Mentors and Ground Station Operators and the requirements and responsibilities needed to help provide a reliable conversation between astronauts and selected schools or groups.

Technical Mentors serve as an advising and coordinating liaison between NASA, the school or group making the ARISS contact, and the Ground Station Operators, who set up the satellite station at the contact location. We encourage anyone interested in helping make future school contacts with the ISS successful to please attend.

AMSAT to Facilitate Student Satellite Contacts

AMSAT is encouraging all students attending the 2012 Dayton Hamvention to come by the Satellite Demonstration Area just outside of the Ball Area entrance and make a contact using the amateur satellites. There will be AMSAT volunteers there to explain how to make the contacts and during actual satellite passes will try to get as many students as possible to complete actual contacts. There are lists of satellite pass times in the satellite demonstration area and at the AMSAT booth.

[ANS thanks Gould Smith, WA4SXM for the above information]

Silent Key: Dee Interdonato, NB2F

AMSAT has received the sad news of the passing of Dee Interdonato, NB2F on April 8, 2012. Dee was one of the editors of the AMSAT News Service and an AMSAT New Jersey Area Coordinator. He was the main point of contact for many amateurs as he covered most of the New Jersey hamfests on behalf of AMSAT. Dee was one of the mainstay volunteers for AMSAT at the Dayton Hamvention for years. He also gave satellite presentations for the clubs in New Jersey. Dee helped

where ever he could, often behind the scenes. He worked on QSL duties for SAREX, ARISS, and ARISSat-1 missions so many of you have likely received a card from him.

Dee was a well known and respected mentor for amateur satellite operators, helping them understand the technical details and make successful radio contacts via satellites.

Dee's other amateur radio activities in Northern New Jersey included the Bergen Amateur Radio Association, Bergen County CERT, AMSAT, and he was the treasurer of the Bergen County FM Association. Dee, and his wife Ginny, N2EYN always participated in the Dayton Hamvention and AMSAT Symposiums.

Dee was the principal trumpet player for the Rutherford Community Band and a member of the Waldwick and Westwood Community Bands. He was also an avid hunter and a member of the Association of New Jersey Rifle and Pistol Clubs.

Before retiring he was the supervisor of the Radio Shop of the Port Authority of NY/NJ.

The funeral was held on Friday, April 13 in his hometown of Lodi, New Jersey. In lieu of flowers memorial contributions may be made to the Vietnam Veterans of America, 8719 Colesville Rd., Suite 100, Silver Spring, Maryland 20910 or AMSAT, 850 Sligo Road, Suite 600, Silver Spring, MD 20910.

Dee Interdonato, NB2F obituary:
http://tinyurl.com/NB2F-Obituary (santangelofuneralhome.com)

Guestbook for Dee Interdonato, NB2F
http://tinyurl.com/NB2F-Guestbook (santangelofuneralhome.com)

[ANS thanks the AMSAT Office for the above information]

April 19 California Flabob Airport ARISS Contact

ARISS technical support volunteer, Clint Bradford, K6LCS said this week that "It's a Go!" for students at the The Tom Wathen Center at the historic Flabob Airport in Jurupa Valley (Riverside County), California, for an amateur radio call from the International Space Station on Thursday morning, April 19, 2012 at 10:03AM PDT (UTC-7). The link will be via telebridge contact via IK1SLD providing the radio link to space and then connecting via phone lines with the students.

The Tom Wathen Center was chosen for this Amateur Radio on the International Space Station (ARISS) contact during an open application process in the Fall of 2011. The 10-minute live question-and-answer session will take place in Flabob's Hanger 16A conference center, and is free to the public.

To prepare for the ARISS contact, Flabob students are studying the history and mission of space station and mission control, rocket fabrication, astronaut selection and training, and mission control and station operations along with radio technology and communication topics.

An amateur radio station is operational onboard the International Space Station. Most astronauts have amateur radio licenses and operate the onboard station to contact radio amateur ground stations in their free time. Per an agreement with multiple space agencies involved with building the ISS, ARISS prepares and implements educational contacts for students - more than 120 in 2011 alone. Amateur radio operators on the ground volunteer their radio station, expertise and time to make the conversations between the students and astronauts happen. The ARISS international working group is supported by the national radio amateur societies AMSAT-NA and the American Radio Relay League (ARRL).

This ARISS contact is one in a series with educational organizations in the U.S. and abroad to improve teaching and learning in science, technology, engineering and mathematics. It is an integral component of Teaching From Space, a NASA Education office. The office promotes learning opportunities and builds partnerships with the education community using the unique environment of human spaceflight.

Clint published all of the details on the Flabob Project Web site: http://www.iss-flabob.com.

The City of Jurupa Valley will declare the week of April 15-21 'Space Week' at their April 19, 2012 regular city council meeting acknowledging the efforts of the students at The Tom Wathen Center's Flabob Airport Preparatory Academy, who have spent months learning about space exploration while preparing for their amateur radio contact with the ISS.

[ANS thanks Clint Bradford, K6LCS for the above information]

UT1FG/MM and K8YSE Enjoy Eyeball QSO Aboard Ship

John Papay, K8YSE had a unique experience on Easter Sunday, April 8 when he got the opportunity for an eyeball QSO with Captain Yuri Bodrov, UT1FG/MM aboard the MV Barnacle traveling from Thunder Bay, Ontario, Canada on Lake Superior en route to Puerto Rico via the Great Lakes and St. Lawrence Seaway.

Yuri has been activating wet grids as UT1FG/MM operating this year from the MV Barnacle as he sails the seas between Europe, South America, the Caribbean, and North America. Last year Yuri captained the MV Mottler on a similar sea voyage when many first met him operating on the air via the amateur radio satellites. He is the Captain of the state-of-the-art seagoing vessel with 10,000 horsepower plant.

John had an idea that he could drive from his QTH to watch as the MV Barnacle passed through the Welland Canal connecting Lake Erie and Lake Ontario. The ship would have to pass through eight locks which might put John and Yuri within shouting distance.

On Saturday night John and Yuri chatted on 144.200 sideband as the MV Barnacle sailed from the Detroit River and across Lake Erie en route toward Lake Ontario. Yuri estimated his arrival at the Welland Canal would be around 0800. John hit the road from his QTH at about 0315 Sunday morning, passed customs to enter Canada and then drove to the Lake Erie entrance to the Canal.

Sunday morning John met up with Kevin, VE3RCN/VA3OR in Port Colborne, Ontario. Radio contact was established with Yuri on 146.520 MHz. The ship came in sight along the Lake Erie shore. John and Kevin were within waving distance. As the MV Barnacle entered Lock 8 the shore party was close enough to talk with Yuri aboard the ship.

As the ship cleared the lock John and Kevin lost contact for a short time. They were able to catch up with Yuri at the next lock. As the new Canal Pilot was boarding ship John got an invitation to come aboard. John boarded as the ship lowered to the dock level. He told what happened next, "A minute later I was on the bridge with Captain Yuri UT1FG. Finally I was able to meet a guy that I've been working on the satellites in hundreds of water grids since April 2009!"

A tour of the ship included a visit to Yuri's cabin, one level below the bridge. His quarters are quite nice and private. This is where he operates with his IC706, manually tuning the radio and doing a great job at that! The power supply from HP1CQ sat on the table in the corner and a computer running Orbitron is on the other side.

Yuri now has an ELK antenna installed (thanks to the efforts of Rick, WA4NVM). It is mounted on a manually rotatable mast that goes up from the bridge, starboard side, directly above his cabin. The ELK is tilted up at 15 degrees and was just installed on the way back from Thunder Bay. A CJU antenna is mounted on the crossboom next to the ELK. A vertical for 2 meters is on a separate mast above those antennas. Until this season Yuri only used the 2 meter vertical for transmit and receive. The CJU improved things greatly and the ELK takes it to a new level. Yuri plans to install SatPC32 when he has more free time on the open sea; passing through the St. Lawrence Seaway keeps him and his crew very busy.

John said he sailed with Yuri until Lock 2 where it was time to get back ashore. Kevin, VE3RCN/VA3OR and his XYL Donna, VE3WIZ were waiting and gave John a ride back to his car, 30 miles away in Port Colborne.

John wrote, "I want to thank Kevin VA3OR/VE3RCN and his wife Donna, VE3WIZ, for spending their Easter Sunday hosting my visit to the Canal. I'm sure they had better things to do but they decided to take me all around and make my visit a memorable one. I hope they

enjoyed the day as much as I did." And a big thanks to Master Yuri Bodrov and his crew for their hospitality. It was an experience that very few will ever have."

Yuri plans to work the water grids on the way south to San Juan, Puerto Rico where he is due on April 20. The next port-of-call for Yuri and the crew of MV Barnacle is yet to be determined. Yuri will be the Captain until the end of May, 2012. If you work Yuri on the air QSL via his manager UX0FY (on qrz.com).

[ANS thanks John Papay, K8YSE for the above information]

NASA-TV Plans Coverage of April 17 Washington DC Shuttle Fly Over

NASA's 747 Shuttle Carrier Aircraft (SCA) with space shuttle Discovery mounted atop will fly approximately 1,500 feet above various parts of the Washington, D.C. metropolitan area on Tuesday, April 17.

The flight, in cooperation with the Federal Aviation Administration, is scheduled to occur between 10 and 11 a.m. EDT (UTC-4). NASA Television and the agency's web site will provide live coverage. NASA TV is streamed on the web at: http://www.nasa.gov/ntv.

The exact route and timing of the flight depend on weather and operational constraints. However, the aircraft is expected to fly near a variety of landmarks in the metropolitan area, including the National Mall, Reagan National Airport, National Harbor and the Smithsonian's Udvar-Hazy Center. When the flyover is complete, the SCA will land at Dulles International Airport.

Discovery completed 39 missions, spent 365 days in space, orbited the Earth 5,830 times, and traveled 148,221,675 miles. NASA will transfer Discovery to the National Air and Space Museum to begin its new mission to commemorate past achievements in space and to educate and inspire future generations of explorers.

For more information about NASA's transfer of space shuttles to museums, visit: http://www.nasa.gov/transition

A NASA YouTube video shows the flight of the Shuttle Carrier Aircraft:
http://www.youtube.com/watch?feature=player_embedded&v=jbcnqCmXk

Following the event NASA Goddard Space Flight Center in Maryland will publish a photo slideshow on the Goddard homepage: http://www.nasa.gov/goddard and on Goddard's Flickr page: http://www.flickr.com/groups/discoverygoddard/.

[ANS thanks NASA and Perry Klein, W3PK for the above information]

Mexico Satellite Activation for IARU Celebrating 50 Years in Space

Members of the Grupo DXXE in Mexico will use the special call 6H6IARU on 160-6 meter and via satellite from different grids between April 13 to April 18. This station marks the founding of the International Amateur Radio Union (IARU) 87 years ago and the "World Amateur Radio Day" on April 18.

This year's World Amateur Radio Day has the motto "Celebrating 50 Years in Space" with the first launches of amateur radio satellites OSCAR 1 on December 12, 1961, and OSCAR 2 on June 2, 1962.

QSOs with 6H6IARU count for the IARU Region 2 award, several FMRE awards and the DXXE award. QSL via N7RO, LoTW.
See also: http://www.dxxe.org

[ANS thanks DXNL 1775 DX Newsletter for April 11, 2012 for the above information]

Satellite Beacon Mission Suggested for Asteroid Apophis

This week UniverseToday.com carried an article about a Russian mission proposal to send a satellite with a radio beacon to asteroid 99942 Apophis to better determine its trajectory and find out how big of a threat it might be to Earth in passes the asteroid will make in 2036 and 2068.

Apophis is approximately 270 meters (885 ft) in diameter, the size of two-and-a-half football fields.

Apophis is expected to make a record-setting • but harmless • close approach to Earth on Friday, April 13, 2029 when it comes no closer than 29,450 km from Earth (18,300 miles). The Russian Academy of Sciences said, "From the technical point of view, the mission could be started for implementation around 2015".

Read the full story at:
http://tinyurl.com/Apophis-Beacon (UniverseToday.com)

[ANS thanks UniverseToday.com for the above information]

Russia to Build Nuclear Space Engine by 2017

In contrast to last week's ANS news item about Switzerland's EPFL University's MicroThrust ion motor which will be capable of reaching the Moon using just a tenth of a liter of fuel, a news report published on Space-Travel.com this week says a Russian Megawatt-class nuclear propulsion system for long-range manned spacecraft is under development.

Russian space officials believe that nuclear engines for interplanetary spaceships are a very promising area, as solar power is too weak to be used as a power source at distances beyond Earth's orbit.

The megawatt power system may be the power plant producing the high energy required for an ion thrust system capable of powering manned spacecraft to the moon, Mars, and interplanetary destinations.

NASA started a program to develop a nuclear propulsion system in 2003, and spent several hundred million dollars on the project before cutting funding.

Read the full story at:
http://tinyurl.com/Megawatt-Engine (space-travel.com)

[ANS thanks Space-Travel.com for the above information]

India's Atharva Satellite Ground-Station Inauguration

The Atharva College of Engineering, University of Mumbai in India has inaugurated the Atharva Satellite Ground-Station. Currently, they are associated with the Indian Institute of Technology, Bombay for the communication, telemetry and data acquisition of their Pratham student satellite project.

The primary aim of the Atharva Satellite Ground-Station team at the is to establish a center for the development of wireless technology and satellite communication in Mumbai. During the journey of the last three and half years, we have grown from fundamental research phase to the current phase where we have achieved full operational status.

During the formal inauguration on March 15, 2012 VU2MUE used VO-52 to communicate over a distance of 850 Miles with VU2YEP located in Delhi, the Indian Capital.

The Atharva Satellite Ground-Station Team has an objective of providing communication and telemetry services for the various satellite projects undertaken by the student satellite teams around the globe.

Student blog posted at: http://acegroundstation.blogspot.com/
Photos posted at: http://tinyurl.com/Atharva-Symposium
APRS Location: http://aprs.fi/#!call=2FAtharva&timerange600

[ANS thanks the Atharva Satellite Ground-Station Team for the above information]

CubeSat TURKSAT-3USAT in the Press

The AMSAT-UK web has a story about the Ankara based Amateur Satellite Technology Association (TAMSAT) which has received more press coverage for their new CubeSat TURKSAT-3USAT. The 3USAT is expected to launch near the end of 2012. (See: http://www.uk.amsat.org/6288)

IARU coordinated frequencies are:

+ Transponder uplink: 145.940-145.990 MHz
+ Transponder downlink: 435.200-435.250 MHz
+ CW beacon: 437.250 MHz

This cubesat is a three unit CubeSat developed for SSB/CW communications in low earth orbit. The VHF/UHF transponder and all other subsystems, except the stabilization, are doubled for redundancy. Where possible, both COTS systems and in-house development is employed.

The energy is provided using lithium polymer batteries together with super capacitors. Satellite stabilization is accomplished using passive magnetic attitude control system with hysteresis rods. The satellite is to include a de-orbiting system which will make it re-enter the atmosphere following completion of its life time.

Read the newspaper story in Google English at:
http://tinyurl.com/3USAT-PressStory

[ANS thanks AMSAT-UK for the above information]

Cuba Satellite Group (GROS) Hosts Country-wide Events

Raydel, CM2ESP reported April 13-14 was a busy weekend for Cuba's recently founded "Grupo de Radioaficionados para Operaciones Satelitales" (GROS). The events were coordinated in commemoration of the first human manned spaceflight by Yuri Gagarin the April 12, 1961, the inaugural launch of NASA's Space Shuttle on the same day of 1981 and the celebration of the 87th Anniversary of the founding of the International Amateur Radio Union, IARU, on April 18, 1925. This year the IARU theme for "World Amateur Radio Day" on April 18 is "Celebrating 50 Years in Space" with the first launches of amateur radio satellites OSCAR 1 on December 12, 1961, and OSCAR 2 on June 2, 1962.

On Friday night Hector CO6CBF hosted a talk about amateur radio satellite on Cuba's Pico San Juan 2m repeater. He gave a presentation about GROS, a brief history of amateur radio satellites, and a talk about current operational satellites. Additional topics included station requirements and equipment and operating practices. Arnaldo Coro, CO2KK, Cuba's second ham in perform a satellite QSO and Cuba's first in conduct a EME QSO was a special guest.

On Saturday morning Pavel CO7WT gave a talk at Camag&#65533;ey City Amateur Radio Club. His presentation also included information about GROS, satellite status, equipment and operating techniques, orbital mechanics, and a discussed how to set up a APRS/Beacon Packet station using the ISS digipeater.

[ANS thanks Raidel Abreu Espinet, CM2ESP for the above information]

Satellite Shorts From All Over

+ AMSAT's Fox-1 Paypal donation widget went over the $6000 mark
on Saturday, April 14! Thank you for your generous support.

+ The NASA SkyWatch 2.0 Java applet shows when visible ISS passes
worldwide are happening. The applet runs in your browser window.
1. http://spaceflight.nasa.gov/realdata/sightings/
2. Click Start Applet (some systems may require Java upgrade)
3. When Skywatch starts click on your continent.
4. Then click on nearby city. Use the buttons to select how you
want your data reported.

+ The SA AMSAT Space Symposium will be held at the University of
KwaZulu-Natal on Saturday 12 May. The theme of the symposium is
50 years of amateur satellites celebrating the launch of OSCAR 1
fifty years ago. The full program and registration details are at:
http://www.amsatsa.org.za/SpaceSymposium2012.htm

+ It is time to submit nominations for the upcoming open seats on
the AMSAT-NA Board of Directors. Three directors and two alternate
directors have terms expiring this year. The director seats open
for election are held by Tom Clark, K3IO; Lou McFadin, W5DID; and
Gould Smith, WA4SXM. The alternate director seats open for election
are held by Mark Hammond, N8MH and Patrick Stoddard, WD9EWK. The
AMSAT front page news at http://www.amsat.org has the instructions
to submit your nominations.

+ The Ararat Shrine Hambash in Kansas City, Missouri will be on Sat-
urday, April 21, 2012. Appearing again at this year's Hambash will
be Hams in Space, the team of Randy Schulze - KD�HKD, Eddy Paul -
KY�F, and Jeremy Widner, K�PDX, formerly known as the KC Amateur
Radio Satellite Team. They've dusted off and revised their infor-
mative and entertaining presentation on how to work the FM Amateur
Radio Satellites for the 2012 Season. The Hambash will be held at
5100 Ararat Drive, Kansas City, Missouri 64129. More information:
http://www.hambash.com. http://HamsInSpace.com explains how you
can schedule the Hams in Space Team to provide their informative
and entertaining presentation to your amateur radio group.

+ As the ISS orbited 240 miles (386 km) above Volgograd, the Expedi-
tion 30 crew captured a photo of Moscow at night. Check it out at:
http://www.universetoday.com/94503/moscow-at-night/

+ The night lights of Ireland and England are visible in this photo
from the ISS: http://www.spaceref.com/news/viewsr.html?pid@545

+ While we're looking out of the window on the ISS ... Soyuz and
Progress spacecraft are still lit by the setting sun as the
International Space Station flies over Europe at night:
http://www.spaceref.com/news/viewsr.html?pid@557

+ NASA Goddard Space Flight Center posted a movie captured by the
STEREO spacecraft showing coronal mass ejections slamming into
Mercury. In this movie the Sun is just to the left of the field

of view and the Earth would be millions of miles to the right. Mercury is the bright object moving from right to left against the background of stars near the center of the images. Watch the rough weather on the first rock from the sun at: http://www.flickr.com/photos/gsfc/6915235340/

+ Enjoy a photo tour of the cockpit of the space shuttle Endeavour on the SpaceFlightNow web at: http://spaceflightnow.com/shuttle/sts134/poweron/

+ Keep Spaceport Gagarin in mind for future vacation plans. Russia is building the facility as a part of entertainment resort Vazuza and Yauza Park, being built in Smolensk region, 200 kilometers from Moscow. It will host museums, entertainment facilities, exhibitions and tours for Russian and foreign guests, especially children. More details at: http://tinyurl.com/Spaceport-Gagarin

+ Southgate ARC site has a news item about a 2007 Japan-Broadcasting Corporation TV report about amateur radio Moonbounce (EME) 8N1EME Big Dish operation. Watch the EME contacts at: http://tinyurl.com/8N1EME-NHK (Southgate)

+ Visit the AMSAT-UK web at http://www.uk.amsat.org/6432 for links to download the free April, 2012 issue of SatMagazine. The student built Hiscock Radiation Belt Explorer (HRBE) amateur radio CubeSat formerly known as Explorer-1 [PRIME] is featured on page 10.

+ Eric Knaps, ON4HF posted NOAA APT satellite pictures that he received with his FunCube dongle at: https://picasaweb.google.com/ON4HF.Eric/NOAAWeatherPictures

[ANS thanks everyone for the above information]

/EX

In addition to regular membership, AMSAT offers membership in the President's Club. Members of the President's Club, as sustaining donors to AMSAT Project Funds, will be eligible to receive additional benefits. Application forms are available from the AMSAT Office.

Primary and secondary school students are eligible for membership at one-half the standard yearly rate. Post-secondary school students enrolled in at least half time status shall be eligible for the student rate for a maximum of 6 post-secondary years in this status. Contact Martha at the AMSAT Office for additional student membership information. And with that please keep in mind the memory of ANS Editor Dee Interdonato, NB2F who became a Silent Key this week. This was Dee's week for the bulletins. Take a moment and wish him 73 and offer thanks for all Dee did for AMSAT.

73,
This week's ANS Editor,
JoAnne Maenpaa, K9JKM

64. Weekly Highlights of Solar and Geomagnetic Activity, 09 - 15 April 2012

Newsgroup: rec.radio.amateur.space
Date: 2012-04-16 15:30:06 UTC
From: SWPC.Webmaster@noaa.gov
Message-ID: <20120416153002.0270C33C94@panix2.panix.com>
Source record: 114
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.dx,rec.radio.amateur.space,rec.radio.shortwave,rec.radio.info

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:Product: Weekly Highlights and Forecasts
:Issued: 2012 Apr 16 1335 UTC
# Prepared by the US Dept. of Commerce, NOAA, Space Weather Prediction Center
# Product description and SWPC contact on the Web
# http://www.swpc.noaa.gov/weekly.html
#
# Weekly Highlights and Forecasts
#
Highlights of Solar and Geomagnetic Activity
09 - 15 April 2012

Solar activity was at very low to low levels. Low levels were
observed on 09 April and 15 April. Region 1450 (N16, L=324,
class/area Esi/180 on 06 April) produced a C2 flare at 09/0122 UTC
while Region 1451 (N17, L=306, class/area Cro/020 on 30 March)
produced a C3 flare at 09/1244 UTC. Associated with the C3 flare was
a Type II Radio Sweep (478 km/s) and a CME first observed in
SOHO/LASCO C2 imagery at 09/1325 UTC off the west limb with an
estimated plane of sky speed of 767 km/s. Solar activity was at very
low levels until 15 April when two low level C-class flares were
observed just around the north east limb at 15/0140 UTC and 15/0234
UTC respectively. A faint partial halo CME was also observed
beginning at 15/1000 UTC in SOHO/LASCO C2 imagery with the majority
of the ejecta directed off the northeast limb. The CME was
associated with a B9/Sf flare that occurred at 15/0908 UTC from
Region 1459 (S16, L=96, class/area Dai/80 on 15 April). None of the
CMEs are expected to be geoeffective.

No proton events were observed at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit was at
normal levels on 12 April. Moderate levels were reached on 09, 10
&amp;amp; 11 April and again on 13 April. High levels were reached on 14
&amp;amp; 15 April.

Geomagnetic field activity was at quiet to minor storm conditions
with a period of major storming observed at high latitudes. The
summary period started with mostly quiet conditions until 12 April.
At approximately 12/0300 UTC, solar wind speed began to show a slow
rise while the total field (Bt) component of the interplanetary
magnetic field (IMF) increased to around 10 nT as a coronal hole
high speed stream was moving into a geoeffective position. Solar
wind speeds gradually increased to approximately 655 km/s by 13/0848
UTC. The geomagnetic field responded with quiet to active periods on
```

12 April and active to minor storm periods with an isolated major storm period through mid-day 13 April. By noon on 13 April, solar wind speeds were elevated still around 616 km/s, however the total field had decreased to around 3 nT. Solar wind speed slowly decreased to around 430 km/s by the end of the period. The geomagnetic field was at mostly quiet levels with isolated unsettled to active periods from late on 13 April through the end of the summary period.

Forecast of Solar and Geomagnetic Activity
16 April - 12 May 2012

Solar activity is expected to be very low to low levels with the slight chance for M-class flares during the period.

No proton events are expected at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit is expected to begin the period at high levels, and remain so through 18 April. Conditions are forecast to decrease to normal to moderate levels through 10 May, before increasing to high levels again on 11 and 12 May.

Geomagnetic field activity is expected to begin the period at mostly quiet levels and remain so through 19 April. Quiet to unsettled conditions are forecast due to a solar sector boundary crossing (SSBC) anticipated on 20 April, before returning to mostly quiet conditions on 21 and 22 April. Unsettled to active levels are forecast on 23 and 24 April from an expected recurrent coronal hole (CH). Mostly quiet levels are expected to return 25 April through 01 May. Should see unsettled to active conditions on 02, 03, & 04 May as the ambient background solar winds speeds should increase along with more possible southward Bz. Quiet conditions should return 5-8 May, before the return of high speed solar wind from a large negative polarity CH on 9, 10, 11 May, which is forecast to produce unsettled to active conditions and a possible isolated minor storm in the night sector. 12 May should see a return to mostly quiet levels to round out the period.

65. ANS-113 AMSAT News Service Weekly Bulletins

Newsgroup: rec.radio.amateur.space
Date: 2012-04-22 01:09:15 UTC
From: JoAnne Maenpaa <k9jkm@comcast.net>
Message-ID: <000d01cd2024$85d4ce00$917e6a00$@net>
Source record: 115
Cross-posted to: rec.radio.amateur.space,rec.radio.info

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AMSAT NEWS SERVICE
ANS-113

ANS is a free, weekly, news and information service of AMSAT North
America, The Radio Amateur Satellite Corporation. ANS reports on the
activities of a worldwide group of Amateur Radio operators who share an
active interest in designing, building, launching and communicating
through analog and digital Amateur Radio satellites.

Please send any amateur satellite news or reports to:
ans-editor@amsat.org

**********************************************************************
* Volunteers are needed to help at the AMSAT booth at Dayton. Gould *
* WA4SXM, is looking for volunteers to help man the AMSAT booth dur- *
* ing the 2012 Hamvention. People are needed all 3 days for 2 hour *
* shifts. Please send the days and times you are available to help *
* as well as how many shifts you are willing to work via e-mail to *
* wa4sxm at amsat.org. *
* Monitor http://www.amsat.org/amsat-new/hamvention/2012/Dayton.php *
* for the latest AMSAT at Dayton news and developments *
**********************************************************************

In this edition:
* Schedule of AMSAT Activities at Dayton Hamvention
* May 15 Deadline to Apply for ARRL TI-2 Space in the Classroom Institute
* Five CubeSats in Preparation for July Launch to ISS
* Naval Postgraduate School Develops Multi-CubeSat Deployment System
* Successful ARISS School Contacts with California, Ecuador, and Japan
* Two Months to Field Day - AMSAT FD Rules Posted
* FAA CARSR Radar May Impose Amateur Operating Restrictions on 23cm
* AMSAT-UK on Satellites for World Amateur Radio Day
* UK Will Restrict Use of Amateur Satellite Frequencies During Olympics
* Silent Key - Greg Butler, KI4OTG
* Satellite Shorts From All Over

SB SAT @ AMSAT $ANS-113.01
ANS-113 AMSAT News Service Weekly Bulletins

AMSAT News Service Bulletin 113.01
>From AMSAT HQ SILVER SPRING, MD.
April 22, 2012
To All RADIO AMATEURS
BID: $ANS-113.01
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Schedule of AMSAT Activities at Dayton Hamvention

Here are the daily AMSAT activities at the 2012 Hamvention!

Thursday 17 May 2012

+ 10:00 AM - 5:00 PM
AMSAT Booth Setup at Ball Arena (contact Gould Smith, WA4SXM,
wa4sxm@amsat.org if you can help during this time).

+ 6:30 PM - 10:00 PM
The third Annual AMSAT "Dinner at Tickets" party will be held at
Tickets Pub & Eatery in Fairborn, OH. Food can be ordered from
the menu and drinks (beer, wine, sodas and iced tea) are avail-
able at the bar. Directions and coordinates are on the AMSAT Web
site. Bring some friends and have a great time the night before
Hamvention. Tasty selection of Greek and American food and great
company!

Demos Daily on Friday, Saturday, and Sunday for All Available Passes
---
AMSAT is encouraging all students attending the 2012 Dayton Hamvention
to come by the Satellite Demonstration Area just outside of the Ball
Area entrance and make a contact using the amateur satellites. There
will be AMSAT volunteers there to explain how to make the contacts and
during actual satellite passes will try to get as many students as pos-
sible to complete actual contacts. There are lists of satellite pass
times in the satellite demonstration area and at the AMSAT booth.

Friday 18 May 2012

+ 9:00 AM - 6:00 PM at the AMSAT Booth
AMSAT Booth open for membership renewals, books, new items and
information. Outdoor satellite demonstrations right outide the
Ball Arena entrance. Engineering area with Fox and ARISSat-1
satellite prototype displays.

+ 4:00 PM at the ARRL Stage
AMSAT and ARRL are teaming up during the 2012 Hamvention to
recruit new ARISS (Amateur Radio on the International Space
Station) Technical Mentors and Ground Station Operators.
Friday and Saturday (May 18 & 19) at 4pm in the ARRL stage area
AMSAT Vice President for Educational Relations Mark Hammond N8MH
will explain the need for additional ARISS Technical Mentors and
Ground Station Operators and the requirements and responsibilities
needed to help provide a reliable conversation between astronauts
and selected schools or groups.

+ 6:30 PM - 10:30 PM AMSAT/TAPR Banquet at Dayton 2012
AMSAT/TAPR Banquet on Friday night, May 18 is one of the main AMSAT
activities during the 2012 Hamvention at Dayton.

AMSAT is pleased to announce that Howard Long, G6LVB will be the
featured speaker for the evening event. Howard will be talking
about his FUNcube Dongle, the 64 - 1700 MHz Software Defined Rece-
iver.

Banquet tickets will not be sold at the AMSAT booth during the Ham-
vention so reservations must be made through the AMSAT Store:
http://www.amsat-na.com/store/item.php?id=100158
Tickets are $30 apiece.

Saturday 19 May 2012

+ 9:00 AM - 6:00 PM at the AMSAT Booth
AMSAT Booth open for membership renewals, books, new items and
information. Outdoor satellite demonstrations right outide the
Ball Arena entrance. Engineering area with Fox and ARISSat-1
satellite prototype displays.

+ 11:15 AM - 1:30 PM The AMSAT Forum
Get the latest information about what is going on with AMSAT and
its projects. The AMSAT Forum will be held in Forum Room 5.

+ 4:00 PM at the ARRL Stage
AMSAT Vice President for Educational Relations Mark Hammond N8MH
will explain the need for additional ARISS Technical Mentors and
Ground Station Operators and the requirements and responsibilities
needed to help provide a reliable conversation between astronauts
and selected schools or groups.

Sunday 20 May 2012

+ 9:00 AM - 1:00PM at the AMSAT Booth
AMSAT Booth open for membership renewals, books, new items and
information. Outdoor satellite demonstrations right outide the
Ball Arena entrance. Engineering area with Fox and ARISSat-1
satellite prototype displays.

+ 1:00PM - 5:00PM at the AMSAT Booth
Take down and storage of the AMSAT Booth. (contact Gould Smith,
WA4SXM, wa4sxm@amsat.org if you can help during this time).

[ANS thanks Gould Smith, WA4SXM for the above information]

May 15 Deadline to Apply for ARRL TI-2 Space in the Classroom Institute

The ARRL Education & Technology Program (ETP) is offering an advanc-
ed Teachers Institute (TI-2) session that focuses on space in the
classroom. This four-day professional development workshop is spon-
sored by the Dayton Amateur Radio Association and is held in their
location in Dayton, Ohio (July 9-12).

The TI-2 Space curriculum focuses on the nuts and bolts of setting
up and operating a satellite ground station. This serves as excellent

preparation for a scheduled contact with the ISS through the Amateur Radio on the International Space Station (ARISS) program. But it also provides instruction for continued use of satellites and other man made space assets to explore naturally generated signals, space and a variety of topics.

Thanks to generous assistance from Yaesu USA and Ham Radio Outlet, participants will receive a full ground station that is configured for satellite communications, as well as training on how to set it up and use it to make Amateur Radio contacts and download telemetry data.

To be considered for a seat in TI-2 Space, participants must possess at least a Technician class license at the time off application. ARRL membership is required. Priority for attending the TI-2 Space session will be given to teachers who have developed an educational proposal accepted for participation in the ARISS Program.

This session has a class limit of 8 participants, so apply early! The deadline for the TI-2 Space in the Classroom sessions of the Teachers Institute is May 15.

Full details are posted on the ARRL web at:
http://www.arrl.org/ti-2-space-in-the-classroom

[ANS thanks the ARRL for the above information]

Five CubeSats in Preparation for July Launch to ISS

Five CubeSat teams continue work on preparations for a launch to the International Space Station in the July 18-21, 2012 time frame. These CubeSats will be launched from Tanegashima, Japan aboard the JAXA HTV-3 ISS resupply mission. The CubeSats will be loaded into the J-SSOD deployer on the Japanese Experiment Module, also known as Kibo. They will be deployed with the Kibo robotic arm planned for September, 2012 timeframe.

The five CubeSats include:
+ Raiko
+ We Wish
+ FITSat 1
+ F-1 Vietnam Student CubeSat
+ TechEdSat

RAIKO - Wakayama University, Japan
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http://www.astro.mech.tohoku.ac.jp/RAIKO/ (Japanese)

This 2U CubeSat includes experiments for:
+ Earth photography with a fish-eye lens camera
+ Photo tracking during deployment from ISS to measure relative motion.

+ Experimental star sensor
+ Membrane deployment experiment for de-orbit
+ High speed data communication experiment by Ku-band
communication equipment:
o Orbit determination experiment by Doppler frequency
measurement of Ku-band beacon.
o Mobile ground station and global cooperation for reception

FITSAT-1 - Fukuoka Institute of Technology, Japan
---
http://www.fit.ac.jp/~tanaka/fitsat.shtml

The main mission of this 1U CubeSat will be a demonstration of high speed data transfer from a satellite. A second experiment aboard the satellite involves an attempt at visual tracking from the ground of the high-output LED flash to investigate the possibility of optical communication with satellites. The light from this flash will be received by the ground station equipped with a telescope with photo-multiplier linked to a parabolic antenna tracking the 5.8GHz downlink.

Frequencies announced for FITSAT-1:
CW Beacon 437.250 MHz,
FM Data 437.445 MHz,
High speed data 5840.00 MHz.

WE WISH - Meisei Electric Co., Ltd., Japan
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http://www.meisei.co.jp/news/2011/0617_622.html

The WE WISH mission plans to investigate the monitoring the global environment from space with the use of an upper atmosphere measurement experiment. This includes GPS technology, and technical proof of concept of a micro infra-red camera. The team has the additional goal of contributing to local technical education through the use of CubeSat ground data acquisition.

F-1 Vietnam Student CubeSat

Vietnamese students in Hanoi plan to orbit the country's first satellite, their amateur radio CubeSat F-1 with the callsign XV1VN. The satellite will carry a low resolution C328 camera and two Yaesu VX-3R transceivers using 145.980 and 437.485 MHz.

+ VX-3R1, 437.485 MHz FM downlink:
o Solar cell power only, operates in sunlight only
o Output power: max 0.3W, half-wave dipole antenna
o Morse code beacon (10 chars) using PWM CW every 30 seconds

+ VX-3R2, 145.980 MHz FM downlink:
o Rechargeable battery, operates in dark and sunlight
o Output power: max 1.0W, half-wave dipole antenna
o AFSK 1200bps, half duplex, one AX.25 packet every 30 seconds

If the The F-1 web page at: http://fspace.edu.vn is not available
the latest news and photos have been posted on the AMSAT-UK web:
http://www.uk.amsat.org/5025

TechEdSat - San Jose State University
---
http://ncasst.org/techedsat.html
http://www.uk.amsat.org/5018

TechEdSat is a 1U CubeSat built by San Jose State University in partnership with NASA Ames Research Center and AAC Microtec. It's mission is to evaluate Space Plug-and-play Avionics (SPA) designed in Sweden by AAC Microtec, and to perform a communications experiment utilizing the Iridium and Orbcomm satellite phone network.

Student hands-on learning opportunities were presented during the International Space Apps Challenge on April 21-22. For this challenge, space hackers implemented a fault-tolerant command and control system, utilizing both the OrbComm and Iridium modems as uplink and downlink. Ground segment of the software includes the ability for a laptop, Apple or Android phone to issue commands to the spacecraft over Iridium/Orbcomm. The students will also be challenged with designing the capability for relaying data received from the spacecraft automatically to Twitter.

TechEdSat has received IARU frequency coordination for its downlink on 437.465 MHz.

[ANS thanks the CubeSat teams, AMSAT-UK, and Mineo Wakita JE9PEL for the above information]

Naval Postgraduate School Develops Multi-CubeSat Deployment System

The Space Systems Academic Group (SSAG) at the US Naval Postgraduate School has developed the NPS CubeSat Launcher or NPSCuL (pronounced NPS-cool). This is an auxiliary payload platform to allow multiple CubeSats to be launched aboard rockets as secondary payload meaning the rocket would be able to carry satellites in onboard space that would otherwise be unused.

NPSCuL can accommodate up to 24 CubeSats in a single ESPA-class [Secondary Payload Adapter] payload volume. Upon reaching the desired orbit spring-loaded doors will release the satellites one-by-one.

First flight is planned for August 2012 which will carry 11 CubeSats for the Operationally Unique Technologies Satellite (OUTSat). This will enable NPS researchers to get one of their own CubeSats into space. The NPS STARE CubeSat is part of a collaborative effort between NPS and the Lawrence Livermore National Laboratory (LLNL) on a proof-of-concept mission to observe other satellites and help determine threats posed by space debris.

The NPS has published a press release available on-line at:
http://tinyurl.com/CubeSat-NPSCuL (www.nps.edu).

The AMSAT-UK web also provided coverage of this story at:
http://www.uk.amsat.org/6375

[ANS thanks the US Naval Postgraduate School for the above information]

Successful ARISS School Contacts with California, Ecuador, and Japan

Academia Cotopaxi in Quito, Ecuador

On Friday, April 13, an ARISS) contact was held between students from Academia Cotopaxi in Quito, Ecuador and on-orbit astronaut Don Pettit, KD5MDT via station IK1SLD in Italy. Cotopaxi, an international American school with students in grades pre-K to 12, has a strong relationship with Ecuador's astronaut, Ronnie Nader, and the Ecuadorian Civilian Space Agency (EXA). It utilized several NASA resources in its curriculum covering space, technology and radio. Approximately 500 students and visitors were present for the event.

Saitama Scout Council Japan

Scouts from the Troop 2nd & 3rd Iruma Group, Saitama Scout Council, Scout Association of Japan participated in an ARISS contact on Saturday, April 14. An audience of 70 people, including one magazine representative, turned out for the contact and listened as the Scouts had their questions about living on the ISS answered by on-orbit astronaut Dan Burbank, KC5ZSX. The Scouts have their own radio club, JQ1YWJ and many of the Scouts have been attending amateur radio classes to become licensed.

Flabob Airport Preparatory Academy California

The Flabob Airport Preparatory Academy in Riverside, California had a successful ARISS contact on Thursday, April 19. The telebridge station IK1SLD in Italy provided the radio connection with the ISS. The ARISS contact complemented a comprehensive education plan to pique students' interest in Science, Technology, Engineering and Math (STEM).

After the event, ARISS mentor Clint Bradford, K6LCS declared, "SUCCESS at Flabob Airport this morning! Flight engineer Pettit answered all seventeen of our questions - from fifteen students." There were 211 in the audience, including 120 Flabob students, media, city council members, Gordon West and Don Arnold, and other dignitaries, AND a lot of parents, too!

Media coverage of the Flabob ARISS contact included California's sixth largest daily newspaper, The Press-Enterprise, sent a reporter, videographer, and photographer, the Bob Heil & Gordon West mediacast, Ham Nation, sent a videographer - and the contact will be on an episode

of their webcast in the next couple of weeks. Newspaper coverage included the editor and publisher of The Riverside County Record. Clint was interviewed on PBS radio affiliate KVCR. The Inland Empire Television Network videotaped the entire event.

The Press-Enterprise is the region's major newspaper. Links to their video, article, and photographs are posted on ISS-Flabob site blog at: http://www.iss-flabob.com/ISS-Flabob/Blog/Blog.html

Clint invites you to check out http://www.iss-flabob.com since this site created for the ARISS event also offers links and publications on amateur radio, our space programs, ARISS, AMSAT, ARRL, ham radio licensing - and MORE - on the MORE INFO page.

[ANS thanks Carol Jackson, KB3LKI and the Amateur Radio on the International Space Station (ARISS) Status Report for April 16, 2012 and Clint Bradford, K6LCS for the above information]

Two Months to Field Day - AMSAT FD Rules Posted

AMSAT Director Contests and Awards, Bruce Paige, KK5DO reminds you that time of year is once again approaching - Field Day!

Each year the American Radio Relay League (ARRL) sponsors Field Day as an emergency preparedness exercise. The event takes place during a 24-hour period on the fourth weekend of June. For 2012 the event takes place during a 27-hour period between 1800 UTC on Saturday, June 23, 2012 and 2100 UTC on Sunday June 24, 2012. Those who set up prior to 1800 UTC on June 23 can operate only 24 hours.

The Radio Amateur Satellite Corporation (AMSAT) promotes its own version of Field Day for operation via the amateur satellites, held concurrently with the ARRL event.

With the loss of AO-51 and SO-67 field day this year is going to be most challenging. If you are considering ONLY the FM voice satellites like AMRAD-OSCAR-27 or SaudiSat-Oscar-50 for your primary AMSAT Field Day focus: Don't, unless you are simply hoping to make one contact for the ARRL rules bonus points.

The congestion on FM LEO satellites was so intense in prior years that we must continue to limit their use to one-QSO-per-FM-satellite. This includes the International Space Station. You will be allowed one QSO if the ISS is operating Voice. You will also be allowed one digital QSO with the ISS or any other digital, non-store-and-forward, packet satellite (if operational).

If you have worked the satellites on Field Day in recent years, you may have noticed a lot of good contacts can be made on some of the less-populated, low-earth-orbit satellites like VUSat OSCAR-52,Fuji-OSCAR 29 (may or may not be operational), AMSAT-OSCAR 7. During Field Day the transponders come alive like 20 meters on a weekend. The good

news is that the transponders on these satellites will support multiple simultaneous contacts. The bad news is that you can't use FM, just low duty cycle modes like SSB and CW.

The AMSAT Field Day 2012 event is open to all Amateur Radio operators. Amateurs are to use the exchange as specified in ARRL rules for Field Day. The AMSAT competition is to encourage the use of all amateur satellites, both analog and digital.

For the complete listing of the AMSAT Field Day Rules please refer to the documents posted on-line at:
http://www.amsatnet.com/fd2012.doc
http://www.amsatnet.com/fd2012.pdf
Links are also accessible from http://www.amsat.org front page.

[ANS thanks AMSAT Director Contests and Awards, Bruce Paige, KK5DO for the above information]

FAA CARSR Radar May Impose Amateur Operating Restrictions on 23cm

An ARRL bulletin this week noted that the Federal Aviation Administration (FAA) is deploying a new generation of Common Air Route Surveillance Radar (CARSR) that has some implications for the use of the 1240-1300 MHz (23 cm) band by amateurs.

The Amateur Service allocation in this band is on a secondary basis, with aeronautical radionavigation and several other services primary in the United States Table of Frequency Allocations. The FCC rules require that amateur stations operating in the 23 cm band may not cause harmful interference to stations in the radionavigation-satellite service, the aeronautical radionavigation service, the Earth exploration-satellite service or the space research service.

One case of harmful interference in Southern California has been reported. CARSRs are being installed in several dozen locations throughout the country and will use various frequencies in the 1240-1350 MHz range with an occupied bandwidth of about 3 MHz. In the vicinity of the radars, amateur operation may be precluded in a portion of the 23 cm band. The ARRL is in contact with FAA engineers. The ARRL said they anticipate that the constraints on amateur use of the band will be limited to those necessary to protect aviation safety, which of course cannot be compromised.

The bulletin is posted on the ARRL web at:
http://www.arrl.org/news/amateurs-must-protect-new-radars-in-23-cm-band

[ANS thanks the ARRL for the above information]

AMSAT-UK on Satellites for World Amateur Radio Day

Members of AMSAT-UK operated on the amateur radio satellites from the RSGB National Radio Centre at Bletchley Park to celebrate World Amateur Radio Day (WARD) on Wednesday, April 18, 2012.

World Amateur Radio Day commemorates the founding of the International Amateur Radio Union (IARU) on April 18, 1925. This year's theme was "Amateur Radio Satellites: Celebrating 50 Years in Space" in remembrance of the launching of OSCAR 1 on December 12, 1961 and the launch of OSCAR 2 on June 2, 1962.

Those taking part in the event were Jim G3WGM, Dave G4DPZ, Trevor M5AKA, Ciaran M0XTD, Matthew SWL, Clive G3CWV, Carlos G0AKI and Elaine G4LFM. The satellites worked during the day included FO-29 and AO-7 and contacts were made with stations across Europe using the 144 and 430 MHz bands.

The equipment used comprised a Kenwood TS-2000 with WiMo X quads for 144 and 430 MHz, with pre amps and polarisation switches.

Read the rest of this article, along with links to photos and video on-line on the AMSAT-UK web: http://www.uk.amsat.org/6516

[ANS thanks AMSAT-UK for the above information]

UK Will Restrict Use of Amateur Satellite Frequencies During Olympics

Trevor, M5AKA has filed the following notice on the AMSAT-UK web. The Olympic and Paralympic Games will be using almost half of the 430 MHz amateur radio allocation as well as segments of 2.3 GHz and 3.4 GHz during the period June 28 to September 23.

The impact on the Amateur-satellite Service 435-438 MHz allocation has been restricted to 436.25-437.25 MHz. It is understood that the equipment being used in the 430 MHz band will include handheld FM rigs at the hotels, the routes to the venues and the venues themselves.

The UK communications regulator Ofcom has provided details of the areas that need to be protected from RF within the designated frequency ranges. Follow the link to the AMSAT-UK web provided below for the details of the region affected by the restrictions.

Ofcom say the use of radio by Amateurs in the designated areas could cause interference to Games applications; it is also possible that higher power transmissions from outside these areas could cause interference. Consequently, to avoid the risk of interference to Games applications, Ofcom request that Amateurs do not operate within the frequency ranges identified in the areas defined in Annexes A and B, and that Amateurs ensure that any signals that could be received in these areas are negligible. This indicates that the specified frequency ranges should be avoided for a considerable distance outside the designated zones. Clearly a well equipped station on a good site 75 km from the edge of a zone could still put a signal into that

area.

Full story on AMSAT-UK web at: http://www.uk.amsat.org/6574

[ANS thanks Trevor, M5AKA and AMSAT-UK for the above information]

Silent Key - Greg Butler, KI4OTG

AMSAT has received the sad news of the passing of satellite operator Greg Butler, KI4OTG of Memphis, Tennessee. Greg had a a heart attack on April 18 and did not survive it. He just turned 48 in February. He is survived by his 18 year old son

Rick Tillman, WA4NVM noted, "Greg was one of the truly nice guys, always polite and there to help. It's been our great pleasure and privilege to know and work with him in the Memphis ham community. He will truly be missed. God bless your soul faithful servant,"

John Papay, K8YSE recalled, "Greg was one of the most courteous operators that I've known. He was active on the birds and enjoyed working new grids. Greg was a gentlemen. We will miss hearing his voice on the birds."

[ANS thanks Rick Tillman, WA4NVM and John Papay, K8YSE for the above information]

Satellite Shorts From All Over

+ It is time to submit nominations for the upcoming open seats on the AMSAT-NA Board of Directors. Three directors and two alternate directors have terms expiring this year. The director seats open for election are held by Tom Clark, K3IO; Lou McFadin, W5DID; and Gould Smith, WA4SXM. The alternate director seats open for election are held by Mark Hammond, N8MH and Patrick Stoddard, WD9EWK. The AMSAT front page news at http://www.amsat.org has the instructions to submit your nominations.

+ The 2012 AMSAT Annual Meeting and Symposium will be held at the Holiday Inn, Orlando (Florida) Airport on October 26-28, 2012. Watch for the Call for Papers and more details as they become available. If you are interested in a Monday Trip (October 29) to the Kennedy Space Center please contact Martha via email: martha at amsat.org. The trip will include a round trip bus from the hotel and entrance to the Space Center. The cost will be about $100. This is a wonderful experience for those that haven't been and for those that have been multiple times. We need to get an idea of how many will participate to select the correct bus.

+ If you worked KP4FD as members of the Puerto Rico Field Day Group celebrated the IARU "World Amateur Radio Day" on April 18 you can

receive an electronic certificate by sending a request via WP3GW. The group will also provide confirmations will be via eQSL and LoTW.

+ The next Hudson Valley Satcom net date is Thursday, April 26 at 8:00 PM EDT (UTC -4) on the 146.970 MHz repeater, and also on the N2EYH-L Echolink node. More info: http://www.hvsatcom.org/ (via Stu, WA2BSS)

+ Technical papers are solicited for presentation at the 31st Annual ARRL and TAPR Digital Communications Conference on September 21-23, 2012 in Atlanta, Georgia. Please send papers to: Maty Weinberg, ARRL, 225 Main St., Newington, CT 06111 or via e-mail to: maty@arrl.org.

+ UniverseToday posted a collection of photos of the Shuttle Discovery final flight aboard NASA's 747 Shuttle Carrier Aircraft during its Washington DC overflight and delivery to the Smithsonian Udvar-Hazy Center in Chantilly, Virginia. See:
http://www.universetoday.com/94660/discovery-does-dulles-dc/
Video of the event is posted at: http://tinyurl.com/April17-Discovery
Photos and a video of Discovery's departure from the Kennedy Space Center in Florida are posted at: http://tinyurl.com/Florida-Discovery
NASA Goddard Center photos of the flight over Washington DC are at:
http://www.flickr.com/groups/discoverygoddard/
A time-lapse photo panorama of Discovery's take-off from Florida:
http://spaceflightnow.com/shuttle/sts133/images/pano_full.jpg

+ See how the moon appears to the crew aboard the ISS:
http://www.universetoday.com/wp-content/uploads/2012/04/moon-iss.jpg

+ Students at Drexel University need mentoring in setting up a ground station. If you can help please contact Nick Pugh, K5QXJ via e-mail at quadpugh@bellsouth.net and he will put you in touch with the professor leading the cubesat program.

+ Painstakingly assembled from over 150,000 digital photos taken over the course of eight months, this stunning time-lapse video of aurora-filled Arctic skies is the latest creation by photo/video artist Ole C. Salomonsen. Take a moment, turn up the sound, sit back and enjoy the show! Play this too much and the XYL is going to wonder what you're up to in the shack:
http://tinyurl.com/Celestial-Lights (universetoday.com)

[ANS thanks everyone for the above information]

/EX

In addition to regular membership, AMSAT offers membership in the President's Club. Members of the President's Club, as sustaining donors to AMSAT Project Funds, will be eligible to receive addi-

tional benefits. Application forms are available from the AMSAT Office.

Primary and secondary school students are eligible for membership at one-half the standard yearly rate. Post-secondary school students enrolled in at least half time status shall be eligible for the student rate for a maximum of 6 post-secondary years in this status. Contact Martha at the AMSAT Office for additional student membership information. And with that please keep in mind how fast we are going as the Earth orbits the sun at an average speed close to 30 km per second. The Sun travels at a speed of 250 km per second, but it still takes 230 million years for it to complete a single revolution of the galaxy.

73,
This week's ANS Editor,
JoAnne Maenpaa, K9JKM

66. Weekly Highlights of Solar and Geomagnetic Activity, 16 - 22 April 2012

Newsgroup: rec.radio.amateur.space
Date: 2012-04-23 15:30:11 UTC
From: SWPC.Webmaster@noaa.gov
Message-ID: <20120423153002.D275133C57@panix2.panix.com>
Source record: 116
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.dx,rec.radio.amateur.space,rec.radio.shortwave,rec.radio.info

```
:Product: Weekly Highlights and Forecasts
:Issued: 2012 Apr 23 1405 UTC
# Prepared by the US Dept. of Commerce, NOAA, Space Weather Prediction Center
# Product description and SWPC contact on the Web
# http://www.swpc.noaa.gov/weekly.html
#
# Weekly Highlights and Forecasts
#
Highlights of Solar and Geomagnetic Activity
16 - 22 April 2012

Solar activity was at low to moderate levels. Moderate levels were
reached on 16 April with an M1.7 flare from Region 1461 (N13, L=070,
class/area Hsx/090 on 18 April) that occurred at 1745 UTC. Low
levels were observed from 17-22 April. On 18 April, Region 1463
(S26, L=160, class/area Cso/100 on 20 April) produced a C8.9/Sf
flare at 1239 UTC with an associated coronal mass ejection (CME) and
a C5.3 flare with an associated Type II (est. 621 km/s) and Type IV
radio sweeps. On 19 April, a C7.0 flare occurred at 1126 UTC with an
associated Type II and Type IV radio sweeps and a non-geoeffective
CME off the west limb. This event was likely from old Region 1455
(N06, L=206, class/area Fsi/200 on 16 April). Region 1462 (S25,
L=141, class/area Dho/410 on 20 April) produced a C1.8 flare at 1515
UTC with an associated CME on 19 April as well. Only low level
C-class flares were observed for the rest of the summary period.

No proton events were observed at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit was at
high levels on 16 and 17 April. Moderate levels were observed on
18,19, and 21 April while normal levels were observed on 20 and 22
April.

Geomagnetic field activity was mostly quiet, with brief intermittent
periods of unsettled and active levels on several days due to
nighttime effects and southward Bz. A solar sector boundary crossing
was observed on 20 April, and a weak glancing blow CME occurred on
21 April, again producing unsettled to active periods briefly.

Forecast of Solar and Geomagnetic Activity
23 April - 19 May 2012

Solar activity is expected to be at very low to low levels with the
slight chance for M-class flares during the period.
```

No proton events are expected at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit is expected to be at normal to moderate levels from the beginning of the period on 23 April, and persist through 10 May. Flux values are forecast to increase to high levels from 11-14 May due to a coronal hole (CH) high speed stream. From 15 May through the end of the period on the 19th, values are expected to return to moderate or lower levels.

Geomagnetic field activity is expected to begin the period at unsettled and active levels, as the result of a few weak CMEs along with effects from a negative polarity CH. Conditions should settle to mostly quiet levels from 26 April through 08 May, before increasing to active levels with the chance for a minor storm on 09-11 May. Mostly active conditions are expected 14-15 May. The increases in activity are expected from a pair of negative polarity coronal holes. Mostly quiet levels are expected in between the two features on 12 and 13 May, and again from 16-19 May to close out the period.

67. WSR-115 AMSAT Weekly Satellite Report

Newsgroup: rec.radio.amateur.space
Date: 2012-04-26 00:14:00 UTC
From: JoAnne Maenpaa <k9jkm@comcast.net>
Message-ID: <000101cd2341$711636a0$5342a3e0$@net>
Source record: 117
Cross-posted to: rec.radio.amateur.space,rec.radio.info

```
This report is organized into three (3) parts.
Part 1 (S1) - operational analog amateur satellites
Part 2 (S2) - operational digital amateur satellites
Part 3 (S3) - non - operational satellites

SB SAT @ AMSAT W8ISS $WSR-115.S1
WSR 115 Part 1 04/24/2012

AMSAT NEWS SERVICE BULLETIN 115.S1
FROM AMSAT HQ SILVER SPRING, MD, April 24, 2012
TO ALL RADIO AMATEURS
BID: $WSR-115.S1

PW-Sat
Catalog Number:
Launch Date: Febrauary 13, 2012
Launch Site: Kourou, French Guiana

Status: On Orbit

Uplink: 435.020 MHz FM
Downlink: 145.900 MHz DSB

Beacon:

Callsign:

URL:
```

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum2
[03162012]
��DO-64 Delfi-C3
Catalog number: 32789
Launch Date: April 28, 2008 0354z
Launch site: Satish Dhawan Space Centre, India

```
Status: Operational
Current Mode: Science Mode - Beacon ONLY

Telemetry: 145.870 MHz

Downlink: 145.880 to 145.920 MHz
Uplink: 435.530 to 435.570 MHz

Delfi-C3 web page: http://www.delfic3.nl/
```

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnumh
[02092011]
��VO-52 HAMSAT
Catalog number: 28650
Launch Date: May 05, 2005 0444z
Launch site: Satish Dhawan Space Centre, India

Status: Operational
Current Mode: U/v - Dutch Transponder

Frequencies:
Indian Transponder:
Uplink: 435.220 to 435.280 MHz LSB/CW
Downlink: 145.930 to 145.870 MHz USB/CW

Dutch Transponder:
Uplink: 435.225 to 435.275 MHz LSB/CW
Downlink: 145.925 to 145.875 MHz USB/CW

Indian Beacon: 145.9360 MHZ CW
Dutch Beacon: 145.860 MHz 12WPM with CW message

Mode and Antenna Polarization:
V: LHCP
U: RHCP

Official Webpage: http://www.amsatindia.org/hamsat.htm

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum0

To know what transponder is switched on please listen for the beacon
that is active. Each transponder has a different beacon.
[03232012]
��SO-50 SAUDISAT-1C
Catalog number: 27607
Launch date: December 20, 2002 1700z
Launch site: Baikonur, Kazakhstan

Status: Operational

Current Mode: V/u

Uplink: 145.850 MHz FM - 67.0 Hz PL tone
Downlink: 436.795 MHz

Mode and Antenna Polarization:
V: Linear
U: Linear

Official Webpage: http://saudisat.kacst.edu.sa/index.shtml
(not up and running currently)

To switch the transmitter on, you need to send a CTCSS tone of 74.4 Hz. The order of operation is thus: (allow for Doppler as necessary):
1) Transmit on 145.850 MHz with a tone of 74.4 Hz to arm the 10 minute timer on board the spacecraft.
2) Now transmit on 145.850 MHz (FM Voice) using 67.0 Hz to PT the repeater on and off within the 10 Minute window.
3) Sending the 74.4 tone again within the 10 minute window will reset the 10 minute timer.
[02092011]
��FO-29 JAS-2
Catalog number: 24278
Launch Date: August 17, 1996

Status: Operational
Current Mode: V/u (Mode JA)

Voice/CW (Mode JA)
Uplink: 145.90 to 146.00 MHz CW/LSB
Downlink: 435.80 to 435.90 MHz CW/USB
Beacon: 435.795 MHz

Digital Mode JD
Uplinks: 145.850 MHz FM
145.870 MHz FM
145.910 MHz FM
Downlink: 435.910 MHz 1200-baud BPSK or 9600-baud FSK
Callsign: 8J1JCS
Digitalker: 435.910 MHz

Mode and Antenna Polarization:
V: RHCP
U: RHCP

For current operational schedule for FO-29:
http://www.ne.jp/asahi/m-arai/gkz/satinfo/fo29e.htm

JARL English webpage:
http://www.jarl.or.jp/English/5_Fuji/ejasmenu.htm

AMSAT-NA Webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID
�retURL�atellites/status.php

Mineo Wakita, JE9PEL, has created a simple decoder program for FO29's CW telemetry downlink: http://www.ne.jp/asahi/hamradio/je9pel/fo29cwts.htm
[01122012]
��AO-27 AMRAD
Catalog number: 22825
Launch date: September 26, 1993 0140z
Launch site: Kourou, French Guiana

Status: Operational

Current Mode: V/u

Uplink: 145.850 MHz FM
Downlink: 436.797 MHz FM

Mode and Antenna Polarization:
V: Linear
U: Linear

Official Webpage: http://www.ao27.org
[02092011]
��AO-7 AMSAT OSCAR 7
Catalog number: 07530
Launch Date: November 15, 1974
Launch site: Vandenberg AFB, California, USA

Status: Operational

Current Mode: Alternating between Mode A and B every 24 hours

Uplink: 145.850 to 145.950 MHz CW/USB Mode A
432.125 to 432.175 MHz CW/LSB Mode B
Downlink: 29.400 to 29.500 MHz CW/USB Mode A (1W PEP)
145.975 to 145.925 MHz CW/USB Mode B (8W PEP)
145.975 to 145.925 MHz CW/USB Mode C (2W PEP)
Beacons: 29.502 MHz CW
145.972 MHz CW
435.100 MHz CW
2304.100 MHz CW

Official Webpage:
http://www.amsat.org/amsat-new/satellites/sat_summary/ao7.php
[04242012]
��INTERNATIONAL SPACE STATION (ISS) - ARISS
Catalog number: 25544
Launch date: November 20, 1998 0640z (ZARYA module)
Launch sites: Baikonur, Kazakhstan
Kourou, French Guiana
Uchinoura Space Center, Japan
Kennedy Space Center, Titusville, Florida, USA

Status: Operational

Current Active Modes: FM Repeater - OFF
Voice - V/v
BBS - OFF
2m APRS - ON
70cm Digi - ON
SSTV - OFF

Expedition 30/31 Crew (November 2011 - July 2012):
Commander: Dan Burbank KC5ZSX
Flight Engineer: Anton Shkaplerov
Flight Engineer: Anatoly Ivanishin

Flight Engineer: Oleg Kononenko RN3DX
Flight Engineer: Andr&#65533; Kuipers PI9ISS
Flight Engineer: Don Pettit KD5MDT

Available Modes and Frequencies:
Digital/APRS:
Worldwide 2m packet uplink: 145.825 MHz FM 1k2
Worldwide 2m packet downlink: 145.825 Mhz FM 1k2
Worldwide 70cm packet downlink: 437.550 Mhz FM 1k2
Worldwide 70cm packet downlink: 437.550 Mhz FM 1k2

Voice:
Region 1 voice uplink: 145.200 MHz FM
Region 2/3 voice uplink: 144.490 MHz FM
Worldwide downlink: 145.800 MHz FM

Crossband Repeater:
Repeater Uplinks: 1269.650 MHz FM
437.800 MHz FM
145.990 MHz FM - 67.0 PL (Kenwood)
Repeater Downlink: 145.800 MHz FM
437.800 MHz FM (Kenwood)

SSTV Robot 36:
Downlink: 145.800 MHz FM

Mode and Antenna Polarization:
V: Linear
U: Linear

Callsigns:
Belgian: OR4ISS
German: DP0ISS
Russian: RS0ISS
RZ3DZR
United States: NA1SS
2m Packet Mailbox: RS0ISS-11
2m Digipeater alias: ARISS
70cm Packet Mailbox: RS0ISS-1
70cm Digipeater callsign: RS0ISS
70cm Digipeater alias: ARISS

Official ARISS Webpage: http://www.rac.ca/ariss
ISS Fan Club Webpage: http://www.issfanclub.com
APRS tracking page: http://www.ariss.net/

ISS Daily Crew Schedule: http://spaceflight.nasa.gov/station/timelines
Remember that the crew operates on UTC time. Also, all of the time
line is NOT translated from Russian and posted.
[03302012]
NNNN
/EX

SB SAT @ AMSAT W8ISS $WSR-115.S2
WSR 115 Part 2 04/24/2012

AMSAT NEWS SERVICE BULLETIN 115.S2
FROM AMSAT HQ SILVER SPRING, MD, April 24, 2012
TO ALL RADIO AMATEURS
BID: $WSR-115.S2

XaTcobeo
Catalog Number: 38082
Launch Date: Febrauary 13, 2012
Launch Site: Kourou, French Guiana

Status: Operational

Uplink:
Downlink: 437.365 MHz FFSK with AX.25

Beacon:

Callsign:

URL:

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum5
[03162012]
��UniCubeSat
Catalog Number:
Launch Date: Febrauary 13, 2012
Launch Site: Kourou, French Guiana

Status: Operational

Uplink:
Downlink: 437.305 MHz 9k6 bps FSK

Beacon:

Callsign:

URL:

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum3
[03162012]
��Robusta
Catalog Number:
Launch Date: Febrauary 13, 2012
Launch Site: Kourou, French Guiana

Status: On Orbit

Uplink:
Downlink: 437.325 MHz 1k2 FM telemetry (data every 1 min, 20 sec. burst)

Beacon:

Callsign:

URL:

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum2
[02142012]
��MO-72 MaSat-1
Catalog Number: 38081
Launch Date: Febrauary 13, 2012
Launch Site: Kourou, French Guiana

Status: Operational

Uplink:
Downlink: 437.345 MHz GFSK 625/1250 bps
437.345 MHz CW

Beacon:

Callsign:

URL:

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum6
[03232012]
��Goliat
Catalog Number: 38085
Launch Date: Febrauary 13, 2012
Launch Site: Kourou, French Guiana

Status: Operational

Uplink:
Downlink: 437.485 MHz 1k2 AFSK

Beacon:

Callsign:

URL:

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum�
[03162012]
��E-Star
Catalog Number: 38079
Launch Date: Febrauary 13, 2012
Launch Site: Kourou, French Guiana

Status: On Orbit

Uplink:
Downlink: 437.445 MHz 1k2 bps AFSK

Beacon:

Callsign:

URL:

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum0
[03232012]
��ALMASat1
Catalog Number: 38078
Launch Date: Febrauary 13, 2012
Launch Site: Kourou, French Guiana

Status: On Orbit

Uplink:
Downlink: 437.465 MHz 1k2 bps FSK
2407.850 MHz

Beacon:

Callsign:

URL:

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum9
[02212012]
��RS-39 Chibis-M
Catalog Number: 37841
Launch Date: October 30, 2011 10:11:00 UTC
Launch site: Tyuratam (Baikonur Cosmodrome), Kazakhstan

Status: Operational

Uplink:
Downlink:

Beacon: 435.315 MHz CW
435.215 MHz CW

Callsign:

URL:

IARU coordination status page:
[01122012]
��JUNGU
Catalog Number: 37841
Launch Date: October 12, 2011 05:30:00 UTC
Launch site: Satish Dhawan Space Centre, India

Status: On Orbit

Uplink: 145.??? MHz 1k2 (mode?)
Downlink: 437.505 MHz 9k6 (mode?)

Beacon: 437.275 MHz 15 wpm (?) CW

Callsign:

URL: http://www.iitk.ac.in/me/jugnu/index.htm

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum0
[01122012]
��SRMSAT
Catalog Number: 37839
Launch Date: October 12, 2011 05:30:00 UTC
Launch site: Satish Dhawan Space Centre, India

Status: On Orbit

Uplink: 145.900 MHz 1k AX.25 (speed?)
Downlink: 437.500 MHz 2k4 AX.25

Beacon: 437.425 MHz 12 wpm CW

Callsign:

URL: http://srmsat.in/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum1
[01122012]
��HRBE (E1P Explorer 1 [Prime] CubeSat (E1P-U2))
Catalog Number: 37855
Launch Date: October 28, 2011
Launch site: Vandenberg Air Force Base, California, USA

Status: On Orbit

Uplink: 437.305 MHz (???)
Downlink: 437.505 MHz AX.25 (SSB?)

Beacon:

Callsign:

URL: http://ssel.montana.edu/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum6
[01122012]
��M-Cubed
Catalog Number: 37855
Launch Date: October 28, 2011
Launch site: Vandenberg Air Force Base, California, USA

Status: On Orbit

Uplink:
Downlink: 437.485 MHz AX.25

Beacon:

Callsign:

URL: http://umcubed.org/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum!5
[01122012]
��RAX-2
Catalog Number: 37853
Launch Date: October 28, 2011
Launch site: Vandenberg Air Force Base, California, USA

Status: Operational

Uplink:
Downlink: 437.345MHz 9k6 GMSK

Beacon:

Callsign:

URL: http://rax.engin.umich.edu//

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum"1
[03232012]
��AO-71 AubieSat-1
Catalog Number: 37854
Launch Date: October 28, 2011
Launch site: Vandenberg Air Force Base, California, USA

Status: On Orbit

Uplink:
Downlink: 437.475 MHz 1k2 AX.25

Beacon: 437.475 MHz CW

Callsign: KI4NQO

URL: http://www.space.auburn.edu/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum8
[12262011]
��O/OREOS
Catalog Number: 37224
Launch Date: November 20, 2010
Launch site: Kodiak Launch Complex, Alaska, USA

Status: On Orbit

Uplink:
Downlink: 437.035 MHZ AX.25

Beacon:

Callsign:

URL: http://www.ooreos.org/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum6
[02092011]
��Rax-1 Radio Aurora Explorer
Catalog Number: 37223
Launch Date: November 20, 2010
Launch site: Kodiak Launch Complex, Alaska, USA

Status: On Orbit

Uplink:
Downlink: 437.505 MHz 9k6 GMSK

Beacon:

Callsign: RAX-1

URL: http://rax.engin.umich.edu/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum5
[02092011]
��FO-69 Fastrac-1 Sara Lily
Catalog Number: 37227
Launch Date: November 20, 2010
Launch site: Kodiak Launch Complex, Alaska, USA

Status: Operational

Uplink 1: 145.980 MHz 1k2 baud
Uplink 2: 145.825 MHz 1k2 baud
Downlink: 437.345 MHz 1k2 and 9k6 baud

Beacon: 437.435 MHz 1k2 AX.25

Callsign: Fast1

URL: http://fastrac.ae.utexas.edu/index.php

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum�
[07052011]
��FO-70 Fastrac-2 Emma
Catalog Number: 37380
Launch Date: November 20, 2010

Launch site: Kodiak Launch Complex, Alaska, USA

Status: Operational

Uplink 1: 435.025 MHz 1k2 baud
Uplink 2: 437.435 MHz 9k6 baud
Downlink: 145.825 MHz 1k2 and 9k6 baud

Beacon: 145.825 MHz 1k2 AX.25

Callsign: Fast2

URL: http://fastrac.ae.utexas.edu/index.php

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=
[12162011]
==StudSat
Catalog Number: 36796
Launch Date: July 12, 2010 0352z
Launch site: Satish Dhawan Space Centre, India

Status: On Orbit

Uplink: 437.505MHz, 9600bps FSK
Downlink: 437.505MHz, 9600bps FSK
Beacon : 437.505MHz, 20bps ASK

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum4
[02092011]
==TIsat-1
Catalog Number: 36799
Launch Date: July 12, 2010 0352z
Launch site: Satish Dhawan Space Centre, India

Status: On orbit

Callsign: HB9DE

Uplink: 145.980MHz FM, AFSK
Downlink: 437.305MHz FM, AFSK
Beacon: 437.305MHz CW

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum8
[02092011]
==SwissCube
Catalog Number: 35932
Launch Date: September 23, 2009 0621z
Launch site: Satish Dhawan Space Centre, India

Status: Operational

Callsign: HB9EG

Beacon(100mw): 437.5050MHz CW
Beacon(1w): 437.5050MHz FSK 1k2bps

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum9
[02092011]
��UWE-2
Catalog Number: 35934
Launch Date: September 23, 2009 0621z
Launch site: Satish Dhawan Space Centre, India

Status: In Orbit

Beacon(500mw): 437.3850 MHz AFSK 1k2bps
437.3850 MHz FSK 9k6bps

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum0
[02092011]
��ITUpsAT1
Catalog Number: 35935
Launch Date: September 23, 2009 0621z
Launch site: Satish Dhawan Space Centre, India

Status: Operational

Beacon(100mw): 437.325MHz CW
Beacon(1w): 437.325MHz 19k2bps

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum3
[02092011]
��BEESAT
Catalog Number: 35933
Launch Date: September 23, 2009 0621z
Launch site: Satish Dhawan Space Centre, India

Status: Operational

Callsign: DP0BEE

Beacon(100mw): 436.000MHz CW
Beacon(500mw): 436.000MHz GMSK 4k8bps
Beacon(500mw): 436.000MHz GMSK 9k6bp
[02092011]
��CP-6
Catalog Number: 35004
Launch Date: May 19, 2009 2355z
Launch site: Wallops Island, Virginia, USA

Status: Operational

Downlink: 437.365 MHz 1k2 AFSK

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum1
[01122012]
��HAWKSAT 1
Catalog number: 35003
Launch Date: May 19, 2009 2355z
Launch site: Wallops Island, Virginia, USA

Status: operational

Downlink: 437.345 MHz ?

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum5
[01122012]
��Pharmasat
Catalog Number: 35002
Launch Date: May 19, 2009 2355z
Launch site: Wallops Island, Virginia, USA

Status: Operational

Downlink: 437.465 MHz 1k2 AFSK

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum�
[02092011]
��ANUSAT
Catalog Number: 34808
Launch Date: April 20, 2009 0115z
Launch Site: Satish Dhawan Space Centre, India

Status: ?

Downlink: 435.000 MHz
Uplink: 145.800 MHz

Telemetry: 137.400 MHz
[02092011]
��SOHLA-1 (ASTRO TECH.)
Catalog Number: 33496
Launch Date: January 23, 2009 0354z
Launch site: Tanegashima Space Center, Japan

Status: Operational

Proposed Frequencies and Modes:
Downlink: 437.505 MHz AFSK/CW
Beacon: 437.505 MHz AFSK/CW

Callsign:

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum1
[02092011]

��KAGAYAKI (Solan Co.)
Catalog Number: 33495
Launch Date: January 23, 2009 0354z
Launch site: Tanegashima Space Center, Japan

Status: In Orbit

Downlink: 437.375 MHZ FSK9k6/CW
Beacon: 437.375 MHz FSK9k6/CW

IARU coordination status page:

AMSAT-NA webpage:

[02092011]
��STARS (Kagawa Univ.) (Twin Satellites)
Catalog Number: 33498
Launch Date: January 23, 2009 0354z
Launch site: Tanegashima Space Center, Japan

Status: Operational ?

Downlinks: 437.485 MHz FM/CW
437.465 MHz FM/CW
Beacons: 437.305 MHz FM/CW
437.275 MHz FM/CW

Callsigns: JR5YBN
JR5YBO

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum�

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID1&retURL
�atellites/status.php
[02092011]
��KKS-1 (Tokyo MCIT)
Catalog Number: 33499
Launch Date: January 23, 2009 0354z
Launch site: Tanegashima Space Center, Japan

Status: Operational

Downlink: 437.455 MHz AFSK/CW
Beacon: 437.385 MHz AFSK/CW

Callsign: JQ1YYY

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum7

AMSAT-NA webapge:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID0&retURL

�atellites/status.php
[20092011]
��PRISM (Tokyo Univ.)
Catalog Number: 33493
Launch Date: January 23, 2009 0354z
Launch site: Tanegashima Space Center, Japan

Status: Operational ?

Downlink: 437.425 MHz AFSK/GMSK/CW
Beacon: 437.250 MHz AFSK/GMSK/CW

Callsign: JQ1YCX

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum�

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID9&retURL
�atellites/status.php
[02092011]
��RS-30 Radio Sputnik 30 (Yubileiny)
Catalog Number: 32953
Launch Date: May 23, 2008 1520z
Launch site: Plesetsk Missile and Space Complex, Russia

Status: Operational

Curent Modes: Telemetry
Audio
Images

Downlinks: 435.315 MHz
435.215 MHz

AMSAT-NA website:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID5&ret
URL�atellites/status.php

Official website:
http://www.npopm.com/?cid�oca&caidC
[02092011]
��CanX-2
Catalog number: 32790
Launch Date: April 28, 2008 0354z
Launch site: Satish Dhawan Space Centre, India

Status: Operational in range of ground station only

Downlink: 437.478 MHz GFSK

For the latest project status update please visit the Can X-2 web
page: http://www.utias-sfl.net/nanosatellites/CanX2/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnumF
[02092011]
��AAUSAT-II
Catalog number: 32788
Launch Date: April 28, 2008 0354z
Launch site: Satish Dhawan Space Centre, India

Status: Operational

Downlink: 437.425 MHz 1k2 baud packet

For the latest project status update please visit the AAUSAT-II web
page:
http://www.aausatii.aau.dk/homepage/index.php?language&page&me

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum`
[02092011]
��CO-65 CUTE-1.7+APD II
Catalog number: 32785
Launch Date: April 28, 2008 0354z
Launch site: Satish Dhawan Space Centre, India

Status: Operational

Downlink: 437.475 MHz 9k6 Packet
Uplink: 1267.600 Mhz

Telemetry Beacon:
Downlink: 437.2750 MHz CW

For the latest project status update please visit the Cute-1.7+APD II
web page: http://lss.mes.titech.ac.jp/ssp/cute1.7/index_e.html

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnumx

Command Station blog website:
http://lss.mes.titech.ac.jp/ssp/cute1.7/blog/

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID2&retURL
atellites/status.php
[03232012]
��Compass-1
Catalog number: 32787
Launch Date: April 28, 2008 0354z
Launch site: Satish Dhawan Space Centre, India

Status: Operational

Current Mode: dependant on last received command

Uplink: 145.980 MHz FM
Downlink: 437.275 Mhz CW
437.405 MHz Packet

For the latest project status update please visit the Compass 1 web
page: http://www.raumfahrt.fh-aachen.de/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnumR

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID4&retURL
�atellites/status.php
[06162011]
��CO-66 Seeds II
Catalog number:
Launch Date: April 28, 2008 0354z
Launch site: Satish Dhawan Space Centre, India

Status: Operational

Downlink: 437.485 MHz

Callsign: JQ1YGU

For the latest project status update please visit the Seeds 2 web
page: http://cubesat.aero.cst.nihon-u.ac.jp/english/seeds_2_e.html

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum6

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID3&retURL
�atellites/status.php
[02092011]
��CAPE-1
Catalog Number: 31130
Launch Date: April 17,2007 0702z
Launch site: Baikonur, Kazakhstan

Status: Intermittent

Current Mode: /u

TLM Downlink: 435.245 MHz 9600 bs FSK AX.25
CW Beacon: 435.245 MHz CW

Callsign: K5USL

TLM and CW interchange every 30 seconds.

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID�&retURL
/satellites/status.php

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnumr
[02092011]
��CP3
Catalog Number: 31129
Launch Date: April 17,2007 0702z
Launch site: Baikonur, Kazakhstan

Status: Operational

Current Mode: /u

Downlink: 436.845 MHz 1200 bps AFSK AX.25

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnumt
[02092011]
��CO-58 CubeSat XI-V
Catalog number: 28895
Launch Date: October 27, 2005 0652z
Launch site: Plesetsk Missile and Space Complex, Russia

Status: Operational - CW Beacon only

Current Mode: /u

Telemetry Downlink: 437.4250 MHz AFSK 1200bps using AFK protocol
Beacon: 437.2750 MHz CW

Callsign: JQ1YGW

Official Webpage: http://www.space.t.u-tokyo.ac.jp/cubesat/mission/V/

Pictures received by Mineo Wakita - JE9PEL:
http://www.ne.jp/asahi/hamradio/je9pel/xivpicte.htm

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum7
[02092011]
��CO-57 CubeSat XI-IV
Catalog number: 27848
Launch date: June 30, 2003 1415z
Launch site: Plesetsk Missile and Space Complex, Russia

Status: ?????

Current Mode: /u

Beacon: 436.8475 MHz CW
Telemetry : 437.4900 MHz AFSK 1200 BPS

Callsign: JQ1YGW

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID�&retURL
�atellites/status.php

Official Webpage: http://www.space.t.u-tokyo.ac.jp/cubesat/mission/V/
[02092011]
��QuakeSat
Catalog Number: 27845
Launch Date: June 30, 2003 1415z
Launch site: Plesetsk Missile and Space Complex, Russia

Status: Telemetry only

Current Mode: 9600 baud data packet

Mode U packet
Downlink: 436.675 MHz 9k6 BPS

Quakesat webpage:
http://www.quakefinder.com/services/quakesat-ssite/
[02252011]
��CO-55 Cute-1.7+APD II
Catalog Number: 27844
Launch date: June 30, 2003 1415z
Launch site: Plesetsk Missile and Space Complex, Russia

Status: Operational

Current Mode: CW downlink worldwide
AX25 Packet with uplink command over Japan only

Mode U Telemetry
Downlink: 437.4000 MHz AFSK 1200 BPS

Mode U TLM Beacon
Downlink: 436.8375 MHz CW

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satIDi&retURL
�atellites/status.php

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnumx
[02092011]
��NO-44 PCSAT
Catalog number: 26931
Launch Date: September 30, 2001 0240z
Launch site: Kodiak Launch Complex, Alaska, USA

Status: Telemetry only

Current Mode: V/v

General Usage Uplink/Downlink: 145.827 MHz 1200 Baud
Special Usage Downlink: 144.390 Mhz 1200 Baud

PCSAT APRS page: http://pcsat.aprs.org

aprstlm Telemetry Decoder program:
http://www.xciv.org/~iain/aprstlm/v1.2/
[02092011]
��RS-22 RADIO SPORT 22 (MOZHAYETS 4)
Catalog number: 27939
Launch Date: September 27, 2003 0612z
Launch site: Plesetsk Missile and Space Complex, Russia

Status: Operational - 70cm cw only

Current Mode: /u

CW Beacon - 435.352 MHz
145.818 MHz

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satIDv&retURL
�atellites/status.php
[02092011]
��LO-19 LUSAT
Catalog number: 20442
Launch date: January 22, 1990
Launch site: Kourou, French Guiana

Status: CW Beacon only

Uplinks: 145.840 MHz 1200-baud Manchester FSK
145.860 MHz 1200-baud Manchester FSK
145.880 MHz 1200-baud Manchester FSK
145.900 MHz 1200-baud Manchester FSK

CW downlink: 437.125 MHz

Digital downlink: 437.150 MHz SSB (RC-BPSK 1200-baud PSK)

Broadcast Callsign: LUSAT-11
BBS: LUSAT-12

General information and telemetry samples can be found at:
www.telecable.es/personales/ea1bcu
[02092011]
��UO-11 OSCAR-11
Catalog number: 14781
Launch Date: March 1, 1984
Launch site: Vandenburg AFB, California, USA

Status: Operational ?

Current Mode: /v

Telemetry Downlink: 145.825 MHz FM 1200 AFSK
UHFBeacon: 435.025 MHz
Mode-S Beacon: 2401.500 MHz

Mode and Antenna Polarization:
V: RHCP
S: LHCP

Webpage: http://www.users.zetnet.co.uk/clivew/
MPEG3 files: http://www.ne.jp/asahi/hamradio/je9pel/uo11tlme.htm
[07052011]
��INTERNATIONAL SPACE STATION (ISS) - ARISS
Catalog number: 25544
Launch date: November 20, 1998 0640z (ZARYA module)
Launch sites: Baikonur, Kazakhstan
Kourou, French Guiana
Uchinoura Space Center, Japan
Kennedy Space Center, Titusville, Florida, USA

Status: Operational

Current Active Modes: FM Repeater - OFF
Voice - V/v
BBS - OFF
2m APRS - ON
70cm Digi - ON
SSTV - OFF

Expedition 30 Crew (November 2011 - July 2012):
Commander: Dan Burbank KC5ZSX
Flight Engineer: Anton Shkaplerov
Flight Engineer: Anatoly Ivanishin
Flight Engineer: Oleg Kononenko RN3DX
Flight Engineer: Andr� Kuipers PI9ISS
Flight Engineer: Don Pettit KD5MDT

Available Modes and Frequencies:
Digital/APRS:
Worldwide 2m packet uplink: 145.825 MHz FM 1k2
Worldwide 2m packet downlink: 145.825 Mhz FM 1k2
Worldwide 70cm packet downlink: 437.550 Mhz FM 1k2
Worldwide 70cm packet downlink: 437.550 Mhz FM 1k2

Voice:
Region 1 voice uplink: 145.200 MHz FM
Region 2/3 voice uplink: 144.490 MHz FM
Worldwide downlink: 145.800 MHz FM

Crossband Repeater:
Repeater Uplinks: 1269.650 MHz FM
437.800 MHz FM
145.990 MHz FM - 67.0 PL (Kenwood)
Repeater Downlink: 145.800 MHz FM
437.800 MHz FM (Kenwood)

SSTV Robot 36:
Downlink: 145.800 MHz FM

Mode and Antenna Polarization:
V: Linear
U: Linear

Callsigns:
Belgian: OR4ISS
German: DP0ISS
Russian: RS0ISS
RZ3DZR
United States: NA1SS
2m Packet Mailbox: RS0ISS-11
2m Digipeater alias: ARISS
70cm Packet Mailbox: RS0ISS-1
70cm Digipeater callsign: RS0ISS
70cm Digipeater alias: ARISS

Official ARISS Webpage: http://www.rac.ca/ariss
ISS Fan Club Webpage: http://www.issfanclub.com
APRS tracking page: http://www.ariss.net/

ISS Daily Crew Schedule: http://spaceflight.nasa.gov/station/timelines
Remember that the crew operates on UTC time. Also, all of the time
line is NOT translated from Russian and posted.
[03302012]
NNNN
/EX

SB SAT @ AMSAT W8ISS $WSR-115.S3
WSR 115 Part 3 04/24/2012

AMSAT NEWS SERVICE BULLETIN 115.S3
FROM AMSAT HQ SILVER SPRING, MD, April 24, 2012
TO ALL RADIO AMATEURS
BID: $WSR-115.S3

THE FOLLOWING ARE IN ORBIT BUT ARE NON-OPERATIONAL AT THIS TIME:

NANOSAIL-D
Catalog Number: 37361(?)
Ejection Date: January 17, 2011

Status: On orbit

Downlink: 437.270 MHz AX.25

URL: http://nanosaild.engr.scu.edu/dashboard.htm

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum5
[01052012]
��HO-68 HOPE-1 (CAS-1)(XW-1)
Catalog Number: 36122
Launch Date: December 15, 2009 0231z
Launch site: Taiyuan Space Center, PRC

Status: Non - Operational

Callsign:
Broadcast: BJ1SA-11
BBS: BJ1SA-12

Uplinks: 145.8250 MHz FM, PL 67.0 Hz.
145.9250 - 145.9750 MHz SSB/CW
145.8250 MHz AFSK 1200 BPS
Downlinks: 435.6750 MHz FM
435.7650 - 435.7150 MHz SSB/CW
435.6750 MHz AFSK 1200 BPS

Beacon: 435.7900 MHz CW

Mode and Antenna Polarization:
V: LHCP 2.0dBi max
U: RHCP 3.0dBi max

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum8

For more information about XW-1 (CAS-1):
http://
[01122012]
��SO-67 SumbandilaSat
Catalog Number: 35870
Launch Date: September 17, 2009 1555z
Launch site: Baikonur, Kazakhstan

Status: Non - Operational

Callsign: ZS0SUM

Uplink: 145.875MHz FM tone 233.6 Hz
Downlink: 435.345MHz FM

Mode and Antenna Polarization:
V: Linear
U: Linear

For more information about SO-67:
http://www.amsatsa.org.za/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum�
[01272012]
��CP4
Catalog Number: 31132
Launch Date: April 17, 2007

Status: Non-Operational

Current Mode: /u

TLM Downlink: 437.325 MHz 1200 bps FSK AX.25
CW Beacon: 437.325 MHz CW

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnumy
[09062010]
��LIBERTAD-1
Catalog Number: 31128
Launch Date: April 17, 2007

Status: Non-Operational

Current Mode: V/u APRS Packet ax25

Callsign: 5K3L

Uplink: 145.825 MHz 1200 AFSK ax25 APRS
Downlink: 437.399 MHz 1200 AFSK ax25 APRS

Telemetry Beacon: 437.4050 MHz 1200 AFSK ax25

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnumv
[09062010]
��PO-63 PEHUENSAT-1
Catalog Number: 29712
Launch Date: January 10, 2007

Status: Non-Operational

Current Mode: V/v

Uplink/Downlink: 145.825 Mhz FM
Voice Recorder: 145.825 Mhz FM

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnumQ
[09062010]
��NCUBE-2
Catalog number: 28897
Launch Date: October 27, 2005

Status: Still attached to XO-53 (SSETI)?

Proposed Callsign: TBA
Proposed Transmit Frequency: 437.305
2407.250

Official Website: http://www.ncube.no

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum$
[09062010]
��XO-53 SSETI
Catalog number: 28894

Launch Date: October 27, 2005

Status: Non-operational

Voice Uplink: 437.250 MHz FM 67Hz CTCSS
Voice Downlink: 2401.835 MHz FM
Packet Up/Downlink: 437.250 MHz 9k6 packet
Packet Downlink 2401.835 MHz 38k4 packet

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnumT
[09062010]
��UWE-1
Catalog Number: 28892
Launch Date: October 27, 2005

Status: Non-Operational

Mode U Telemetry
Downlink: 437.5050 MHz 9600 AFSK

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnumS
[09062010]
��AO-51 ECHO
Catalog number: 28375
Launch date: June 29, 2004 0745z
Launch site: Baikonur, Kazakhstan

Status: Non - Operational

Current Mode(s):
Voice repeater: V/u
Uplink: 145.880 MHz FM
Downlink: 435.150 MHz FM

Telemetry: Recovery efforts
Downlink: 435.150MHz 9k6

Analog voice downlink: 435.300 MHz FM
435.150 MHz FM
2401.200 Mhz FM
Analog voice uplink: 145.860 MHZ FM
145.880 MHz USB
145.880 MHz FM
145.920 MHz FM
145.920 MHz FM - 67 Hz PL tone burst
1268.705 MHz FM
Digital Downlinks: 435.150 MHz FM 38k4 PBP, 1 watt output
435.150 MHz FM 9k6 Pacsat Broadcast Protocol
2401.200 MHz FM 38k4 bps, AX.25
Digital Uplink: 145.860 MHz FM 9k6 Pacsat Broadcast Protocol
1268.703 mhz FM 9k6 Pacsat Broadcast Protocol

Beacon: 435.150 MHz

Mode and Antenna Polarization:
T: Linear
V: Linear
U: TX A (usually digital)LHCP
TX B (usually analog) RHCP
L: Linear
S: Linear

Broadcast: PECHO-11
BBS: PECHO-12

Official Webpage: http://www.amsat.org/amsat-new/echo/CTNews.php

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum
[12062011]
��CANX-1
Catalog Number: 27847
Launch Date: June 30, 2003

Status: Non-Operational

Downlink: 437.8800 MHz AFSK 1k2bps
[06052009]
��DTUSAT
Catalog Number: 27842
Launch Date: June 30, 2003

Status: Non-Operational

Current Mode: 2k4 AFSK Packet last reported

Downlink: 437.475MHz

Officail webpage: http://dtusat1.dtusat.dtu.dk/

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID1&retURL
�tellites/all_oscars.php
[02212009]
��AO-49 AATiS OSCAR-49 (SAFIR-M)
Catalog number: 27605
Launch Date: December 20, 2002

Status: Non-operational.

Uplink: 435.275 MHz 1200-baud AFSK
Downlink: 145.825 MHz 9600-baud FSK
(optional voice message)

Broadcast callsign: DP0AIS

Official webpage: http://amend.gmxhome.de
[01222007]
��MO-46 TIUNGSAT-1
Catalog number: 26548
Launch date: September 26, 2000

Status: Telemetry only

Uplinks: 145.850 MHz
145.925 MHz 9600-baud FSK
Downlink: 437.325 MHz

Broadcast callsign: MYSAT3-11
BBS: MYSAT3-12

TiungSat-1 is Malaysia's first micro-satellite and in addition to
commercial land and weather imaging payloads offers FM and FSK
Amateur Radio communication.

TiungSat-1, named after the mynah bird of Malaysia, was developed as
a collaborative effort between the Malaysian government and Surrey
Satellite Technology Ltd.
[03302009]
��NO-45 SAPPHIRE
Catalog number: 26932
Launch Date: September 30, 2001

Status: Non-Operational

Downlink: 437.095 MHz 1200 baud AX-25 AFSK
Uplink: 145.945 MHz UI Digipeater
Digi Callsign: KE6QMD

Everyone is welcome to use the digipeating/APRS features of Sapphire,
as per the user service agreement located at the following URL:
http://web.usna.navy.mil/~bruninga/pcsat/contract.txt
[03132005]
��SO-42 SAUDISAT-1B
Catalog number: 26549
Launch date: September 26, 2000

Status: Non-Operational

Downlink: 437.075 MHz

Broadcast Callsign: SASAT2-11
BBS: SASAT2-12

Further information is available at:
http://www.amsat.org/amsat/sats/n7hpr/so42.html
[01222007]
��SO-41 SAUDISAT-1A
Catalog number: 26545
Launch Date: September 26, 2000

Status: Non-Operational

Uplink: 145.850 MHz
Downlink: 436.775 MHz

Broadcast Callsign: SASAT1-11
BBS: SASAT1-12

Further information is available at:
http://www.amsat.org/amsat/sats/n7hpr/so41.html
[01222007]
��AO-40 AMSAT OSCAR 40
Catalog number: 26609
Launch Date: November 16, 2000

Status: Non-Operational

Uplinks

V-band: 145.840 - 145.990 MHz CW/LSB
U-band: 435.550 - 435.800 MHz CW/LSB
L1-band: 1269.250 - 1269.500 MHz CW/LSB
L2-band: 1268.325 - 1268.575 MHz CW/LSB

Downlinks

S2-band: 2401.225 - 2401.475 MHz CW/USB
K-band: 24048.010 - 24048.060 MHz CW/USB
Beacon: 2401.323 MHz
24048.035 MHz

P3-D Telemetry Beacons (IHU)

BEACON General Beacon(GB) Middle Beacon(MB) Engineering Beacon(EB)
2 m none 145.898 MHz none
70cm 435.438 MHz 435.588 MHz 435.838 MHz
13cm(1) 2400.188 MHz 2400.338 MHz 2400.588 MHz
13cm(2) 2401.173 MHz 2401.323 MHz 2401.573 MHz
3cm 10450.975 MHz 10451.125 MHz 10451.375 MHz
1.5cm 24047.885 MHz 24048.035 MHz 24048.285 MHz
[07162007]
��OO-38 OPAL
Catalog Number: 26063
Launch Date: January 27, 2000

Status: Non-Operational

Mode U TLM Beacon
Downlink: 437.1000 MHz 9600 FSK
[08132007]
��UO-36 UoSAT-12
Catalog number: 25693
Launch date: April 21, 1999

Status: Unknown

Uplink: 145.960 MHz (9600-baud FSK)
Downlinks: 437.025 MHz
437.400 MHz

Broadcast Callsign: UO121-11
BBS: UO121-12

The VK5HI viewer shareware for UO-36 is available on the AMSAT-NA web
site at the following URL:
ftp://ftp.amsat.org/amsat/software/win32/display/ccddsp97-119.zip
[01222007]
��SO-35 SUNSAT
Catalog Number: 25636
Launch date:February 23, 1999

Status: Non-Operational

Downlink: Mode B Repeater: 436.291 MHz
Mode J Digipeater: 436.250 MHz

Uplinks: Mode B Repeater: 145.825 MHz
Mode J Digipeater: 145.825 MHz
145.900 MHz

For more information of SUNSAT vist the satellite web site:
http://esl.ee.sun.ac.za/projects/sunsat/
[01222007]
��PO-34 PANSAT
Catalog number: 25520
Launch date: October 30, 1998

Status: Telemetry downloads only

Uplink/downlink: 436.500 MHz

Official Webpage: http://www.sp.nps.navy.mil/pansat/
[05092004]
��SO-33 SEDSAT-1
Catalog number: 25509
Launch date: October 24, 1998

Status: Semi-operational

Downlink: 437.910 MHz FM (9600-baud FSK)

The satellite is not currently available for uplink transmissions and
the image and transponder recovery efforts have been unsuccessful.

For more information on SedSat-1 visit the satellite web site:
http://seds.uah.edu/projects/sedsat/sedsat.htm
[09042006]
��GO-32 Gurwin TechSat-1B
Catalog number: 25397

Launch Date: July 10, 1998

Status: Non-Operational

Current Modes:
Telemetry : /u

Downlink: 435.225 MHz FM (9600-baud FSK)
435.325 Mhz - Not Available - temperature problems
Uplinks: 145.850 FM
145.890 FM
145.930 FM
1269.700 FM
1269.800 FM
1269.900 FM

Broadcast Callsign: 4XTECH-11
BBS Callsign: 4XTECH-12

More information of GO-32 can be found at:
http://asri.technion.ac.il/techsat/

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID&retURL
�atellites/status.php
[07172010]
��TO-31 TMSAT-1
Catalog number: 25396
Launch Date: July 10, 1998

Status: Non-operational

Uplink: 145.925 MHz 9600 baud FSK
Downlink: 436.925 MHz 9600 baud FSK

Broadcast callsign: TMSAT1-11
BBS: TMSAT1-12
[05012006]
��MO-30 UNAMSAT-2
Catalog Number: 24305
Launch Date: September 5, 1996

Status: Non-operational

Downlink: 435.1380 MHz AFSK 1200 BPS
Downlink: 435.2060 MHz AFSK 1200 BPS
Uplink: 145.8150 MHz AFSK 1200 BPS
Uplink: 145.8350 MHz AFSK 1200 BPS
Uplink: 145.8550 MHz AFSK 1200 BPS
Uplink: 145.8750 MHz AFSK 1200 BPS
[06042009]
��PO-28 POSAT-1
Catalog number: 22829

Launch Date: September 25, 1993

Status: Non-operational

Downlink: 429.950
Uplink: Not until handover back to Amatuer usage

Broadcast callsign: POSAT1-11
BBS callsign: POSAT1-12

AMSAT Webpage: http://www.amsat.org/amsat/sats/n7hpr/po28.html
POSAT-1 webpage:
http://www.ee.surrey.ac.uk/SSC/CSER/UOSAT/missions/posat1.html
[01012009]
��IO-26 ITAMSAT
Catalog number: 22826
Launch Date: September 26, 1993

Status: PSK carrier only

Current Mode:

Uplinks: 145.875 MHz FM 1200-baud
145.900 MHz FM 1200-baud
145.925 MHz FM 1200-baud
145.950 MHz FM 1200-baud

Downlink: 435.808 MHz PSK

Broadcast Callsign: ITMSAT-11
BBS: ITMSAT-12

Official webpage: http://www.itamsat.org
AMSAT Webpage: http://www.amsat.org/amsat/sats/n7hpr/io26.html
[01212007]
��KO-25 KITSAT
Catalog number: 22828
Launch date: September 26, 1993

Status: Non-operational

Uplink: 145.980 MHz FM 9600-baud FSK
Downlink: 436.500 MHz FM

Broadcast Callsign: HL02-11
BBS: HL02-12
[05092004]
��AO-24 ARSENE
Catalog Number: 22654
Launch Date: May 13, 1993

Status: Non-operational

Uplink: 435.0625 MHz FM 1k2bps AFSK
435.1125 MHz FM 1k2bps AFSK
435.1375 MHz FM 1k2bps AFSK
Downlink: 145.9750 MHz FM 1k2bps AFSK
2446.5025 MHz FM 1k2bps AFSK

Beacon: 2446.4700 MHz CW

Broadcast callsign:
BBS:
[12162009]
��KO-23 KITSAT
Catalog number: 22077
Launch date: August 10, 1992

Status: Non-operational

Uplink: 145.900 MHz FM (9600-baud FSK)
Downlink: 435.170 MHz FM

Broadcast Callsign: HLO1-11
BBS: HLO1-12
[01222007]
��UO-22 UOSAT
Catalog number: 21575
Launch date: July 17, 1991

Status: Non-Operational

Uplink: 145.900 FM 9600-baud FSK
Downlink: 435.120 MHz FM

Broadcast Callsign: UOSAT5-11
BBS: UOSAT5-12
[01222007]
��AO-21 AMSAT-OSCAR 21
Catalog Number: 21087
Launch Date: January 29, 1991

Status: Non-Operational

Uplink: 435.041 MHz FM DSP
Downlink: 145.983 MHz FM DSP
[01222007]
��FO-20 JAS-1b
Catalog number: 20480
Launch Date: February 07, 1990

Status: Non-Operational

Beacons: 435.795 MHz CW
435.910 MHz AX25

Voice Transponder:
Uplink: 145.900 to 146.000 MHz CW/LSB

Downlink: 435.800 to 435.900 MHz CW/USB

Digital Transponder:
Uplinks: 145.850 MHz
145.870 MHz
145.890 MHz
145.910 MHz
Downlink: 435.910 MHz

More FO-20 info can be found at:
http://www.amsat.org/amsat/sats/n7hpr/fo20.html
[01152007]
��WO-18 WEBERSAT
Catalog Number: 20441
Launch Date: January 22, 1990

Status: Non-Operational

Downlink: 437.104 MHz SSB 1200 Baud PSK AX.25
[05012006]
��DO-17 Dove
Catalog Number: 20440
Launch Date: January 22, 1990

Status: Non-operational.

Downlink: 145.825 MHz FM 1200 Baud AFSK
Beacon: 2401.220 MHz
[05012006]
��AO-16 PACSAT
Catalog number: 20439
Launch Date: January 22, 1990

Status: non-operational

Current Mode: V/u

Uplink: 145.900 MHz FM 1200-baud Manchester FSK (reserved)
145.920 MHz FM VOICE
145.940 MHz FM 1200-baud Manchester FSK (reserved)
145.960 MHz FM 1200-baud Manchester FSK (reserved)

Downlink: 437.026 MHz USB VOICE
(1200-baud PSK - MBL Telemetry Only)

Mode-S Beacon: 2401.1428 MHz [NO FUTURE OPERATIONS PLANNED]

Mode and Antenna Polarization:
U: RC 437.050 MHz RHCP
PSK 437.026 MHz LHCP
V: Linear

Broadcast Callsign: PACSAT-11
BBS: PACSAT-12

AO-16 AMSAT Webpage: http://www.amsat.org/amsat/sats/n7hpr/ao16.html
[07242009]
��UO-15 UoSAT-4
Catalog Number: 20438
Launch Date: January 22, 1990

Status: Non-operational

Uplink: ?
Downlink: 435.1250MHz (?)
435.1200MHz (?)
[06042009]
��UO-14 UoSAT-3
Catalog number: 20437
Launch date: January 22, 1990

Status: Non-operational

Uplink: 145.975 MHz FM
Downlink: 435.070 MHz FM
[05092004]
��FO-12 Fuji-OSCAR 12
Catalog Number: 16909
Launch Date: August 12, 1986

Status: Non-Operational

Mode V/U (J) Linear Transponder (Inverting):
Uplink: 145.9000 - 146.0000 MHz SSB/CW
Downlink 435.8000 - 435.9000 MHz SSB/CW

Mode V/U (J) Packet:
Uplink: 145.8500 MHz MFSK 1200 BPS
Uplink: 145.8700 MHz MFSK 1200 BPS
Uplink: 145.8900 MHz MFSK 1200 BPS
Uplink: 145.9100 MHz MFSK 1200 BPS

Downlink 435.9100 MHz PSK 1200 BPS

Telemetry Beacon: 435.7950 MHz SSB/CW
[01152007]
��AO-10 OSCAR 10
Catalog number: 14129
Launch Date: June 16, 1983

Status: Non-operational

Uplink: 435.030 to 435.180 MHz CW/LSB
Downlink: 145.975 to 145.825 MHz CW/USB

Beacon: 145.810 MHz (unmodulated carrier)

W4SM has more information about the satellite at the following URL:
http://www.cstone.net/~w4sm/AO-10.html
[05092004]

��AO-8 AMSAT-OSCAR 8
Catalog Number: 10703
Launch Date: March 3, 1978

Status: Non-Operational

Mode V/U (J) Linear Transponder (Non-Inverting): Non-Operational
Uplink: 145.9000 - 146.0000 MHz SSB/CW
Downlink 435.1990 - 435.2000 MHz SSB/CW

Mode V/U (J) TLM Beacon: Non-Operational
Downlink 435.0950 MHz CW

Mode V/A (A) Linear Transponder (Non-Inverting): Non-Operational
Uplink: 145.8500 - 145.9000 MHz SSB/CW
Downlink 29.4000 - 29.5000 MHz SSB/CW

Mode V/A (A) TLM Beacon: Non-Operational
Downlink 29.4020 MHz CW
[01152007]
��AO-6 AMSAT-OSCAR 6
Catalog Number: 06236
Launch Date: October 15, 1972

Status: Non-Operational

Uplink: 145.9000 - 146.0000 MHz SSB/CW
Downlink: 29.4500 - 29.5500 MHz SSB/CW
Beacons: 29.450 MHz
435.100 MHz
[01312008]
��AO-5 Australis-OSCAR 5
Catalog Number: 04321
Launch Date: January 23, 1970

Status: Non-Operational

Telemetry Beacons: 144.0500 MHz CW
29.4500 MHz CW
[01152007]
��OSCAR III
Catalog Number: 01293
Launch Date: March 09, 1965

Status: Non-Operational

Uplink: 145.9750 - 146.0250 MHz SSB/CW
Downlink: 144.3250 - 144.3750 MHz SSB/CW
[01012007]
��RS-15 RADIO SPORT RS-15
Catalog number: 23439
Launch Date: December 26, 1994

Status: Non-operational

Uplink: 145.858 to 145.898 MHz CW/USB
Downlink: 29.354 to 29.394 MHz CW/USB

Beacon 1: 29.352 MHz (intermittent)
Beacon 2: 29.398 MHz

SSB meeting frequency: 29.380 MHz (unofficial)
[06202004]
��RS-13 RADIO SPORT RS-13
Catalog number: 21089
Launch date: February 5, 1991

Status: Non-operational

Uplink: 21.260 to 21.300 MHz CW/USB
Downlink: 145.860 to 145.900 MHz CW/USB

Beacon: 145.860 MHz

Robot: 145.908 MHz
[05232004]
��RS-12 RADIO SPORT RS-12
Catalog number: 21089
Launch date: February 5, 1991

Status: Non-operational

Uplink: 21.210 to 21.250 MHz CW/USB
Downlink: 29.410 to 29.450 MHz CW/USB

Beacon: 29.408 MHz

Robot: 29.454 MHz
[05232004]
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ANS is released worldwide via the AMSAT ANS e-mail reflector and a live radiocast on the AMSAT-NA 20-meter net held each Sunday on 14.282 MHz. Pre-net operations start at 18:00 UTC, with current ANS bulletins transmitted to the eastern U.S. at 19:00 UTC and to the western U.S. at 19:30 UTC.

Information on AMSAT-NA is available at the following URL:
http://www.amsat.org

Mailing address:
AMSAT-NA
850 Sligo Avenue, Suite 600
Silver Spring, Maryland 20910-4703

Voice: 301-589-6062
888-322-6728
FAX: 301-608-3410

Currently, AMSAT-NA supports the following (free) mailing lists:

* AMSAT News Service (ANS)
* General satellite discussion (AMSAT-BB)
* Orbit data (KEPS)
* Manned space missions (SAREX)
* District of Columbia area (AMSAT-DC)
* New England area (AMSAT-NE)
* AMSAT Educational Liaison mailing list (AMSAT-EDU)
* AMSAT K-12 Educational Liaison mailing list (AMSAT-K12)

A daily digest version is available for each list.

To subscribe, or for more list information, visit the following URL:
http://www.amsat.org/mailman/listinfo/ans

In addition to regular membership, AMSAT-NA offers membership in the President's Club. Members of the President's Club, as sustaining donors to AMSAT Project Funds, will be eligible to receive additional benefits. Application forms are available from the AMSAT-NA Office.

This week's Weekly Satellite Report Editor is James French, W8ISS.

ANS is always dedicated to past ANS editor 'BJ' Arts, WT0N, and to the memory of longtime AMSAT supporters Werner Haas, DJ5KQ, Dennis Kitchen, G0FCL and John Branegan GM4IHJ.

Please send any amateur satellite news or reports to: ans-editor{at}
amsat.org
NNNN
/EX

68. ANS-120 AMSAT News Service Weekly Bulletins

Newsgroup: rec.radio.amateur.space
Date: 2012-04-29 14:33:50 UTC
From: JoAnne Maenpaa <k9jkm@comcast.net>
Message-ID: <000901cd2615$13574eb0$3a05ec10$@net>
Source record: 118
Cross-posted to: rec.radio.amateur.space,rec.radio.info

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AMSAT NEWS SERVICE
ANS-120

ANS is a free, weekly, news and information service of AMSAT North
America,
The
Radio Amateur Satellite Corporation. ANS reports on the activities of a
worldwide group of Amateur Radio operators who share an active interest
in
designing, building, launching and communicating through analog and
digital
Amateur Radio satellites.

Please send any amateur satellite news or reports to:

ans-editor@amsat.org

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* Volunteers are needed to help at the AMSAT booth at Dayton. Gould *
* WA4SXM, is looking for volunteers to help man the AMSAT booth dur- *
* ing the 2012 Hamvention. People are needed all 3 days for 2 hour *
* shifts. Please send the days and times you are available to help *
* as well as how many shifts you are willing to work via e-mail to *
* wa4sxm at amsat.org. *
* Monitor http://www.amsat.org/amsat-new/hamvention/2012/Dayton.php *
* for the latest AMSAT at Dayton news and developments *
**********************************************************************

In this edition:
* Reservations Required - 2012 AMSAT/TAPR Banquet at Dayton
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* Japan to Launch Student High-Voltage Satellite Horyu-2 in May 2012
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* New Proposal Cycle for ARISS-US Contacts
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SB SAT @ AMSAT $ANS-120.01
ANS-120 AMSAT News Service Weekly Bulletins

AMSAT News Service Bulletin 120.01
From AMSAT HQ SILVER SPRING, MD.
April 29, 2012
To All RADIO AMATEURS
BID: $ANS-120.01
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Reservations Required - 2012 AMSAT/TAPR Banquet at Dayton

The sixth annual joint AMSAT/TAPR Banquet will be held Friday evening, May 18, 2012 during the Dayton Hamvention.

The Banquet will be at the:

Kohler Presidental Banquet Center
4572 Presidential Way
Kettering, OH 45429
(just south of Dayton).

Reservations are required and must be made by Monday, 14 May 2012. Seating is limited, so make your reservations early. The price for the Banquet is $30 per person. Reserved tickets may be picked up at the AMSAT booth at Hamvention on Friday, or at the door.

You may make reservations for the 2012 AMSAT/TAPR Banquet online in the AMSAT Store: http://www.amsat-na.com/store/item.php?id0158

AMSAT Presidents Club Gold members should let Martha know if they are planning to attend the banquet. For additional information contact Martha at the AMSAT office (martha@amsat.org).

Banquet Schedule

+ 6:30 PM: Doors open and Cash bar is available with Beer, Wine, Liquor and soft drinks.

+ 7:15 PM: Buffet Dinner service begins. The Center has a justly deserved reputation for good food and service.

+ 8:15 PM: Presentation by Howard Long, G6LVB
Howard will be talking about his FUNcube Dongle, the 64 - 1700 MHz Software Defined Receiver. This innovative USB device is the size of a thumbdrive and has an SMA antenna socket. Multiple SDR control and display software programs can be used with the FUNcube Dongle.

[ANS thanks Gould Smith, WA4SXM for the above information]

AMSAT-NA Board of Directors Nominations

It is time to submit nominations for the upcoming open seats on the AMSAT-NA Board of Directors. A valid nomination requires either one current Member Society, or five current individual members in good standing, to nominate an AMSAT-NA member for the position.

Three directors and two alternate directors have terms expiring this year. The director seats open for election are held by Tom Clark, K3IO; Lou McFadin, W5DID; and Gould Smith, WA4SXM. The alternate director seats open for election are held by Mark Hammond, N8MH and Patrick Stoddard, WD9EWK.

The three nominees receiving the highest number of votes will be seated as regular board members with two year terms. The two nominees receiving the next highest number of votes will be seated as alternate directors for one year.

Written nominations, consisting of names, calls and individual signatures, should be mailed to: AMSAT-NA, 850 Sligo Ave #600, Silver Spring, MD, 20910. They must be received no later than June 15th. No other action is required.

Nominations may also be made by electronic means including e-mail, FAX, or electronic image of a petition. Electronic petitions should be sent to MARTHA@AMSAT.ORG or faxed to 301-608-3410, and also must be received by June 15th. If using any electronic submission, there is a second, verifying step:

ELECTRONIC SUBMISSIONS WITHOUT THIS SECOND, WRITTEN VERIFICATION ARE NOT VALID UNDER THE EXISTING AMSAT-NA BYLAWS. A verifying traditional written petition MUST be received at the AMSAT-NA office at the above address within 7 days following the close of nominations.

[ANS Thanks AMSAT Secretary Alan Biddle, WA4SCA for the above information]

AMSAT 2012 Symposium First Call for Papers

This is the first call for papers for the 2012 AMSAT Annual Meeting and Space Symposium to be held in Orlando, Florida on the weekend of October 26-28, 2012 at the Holiday Inn, Orlando Airport Hotel.

Proposals for papers, symposium presentations and poster presentations are invited on any topic of interest to the amateur satellite community:

+ Papers for publication in the Proceedings

+ Symposium Presentations

+ Poster Presentations

+ Equipment and Operating Demonstrations

We request a tentative title of your presentation as soon as possible, with final copy to be submitted by October 1 for inclusion in the printed proceedings.

Abstracts and papers should be sent to Dan Schultz, N8FGV, at n8fgv@amsat.org.

The Symposium weekend will feature:

+ Space Symposium with Amateur Satellite Presentations

+ Operating Techniques, News, & Plans from the Amateur Satellite World

+ Board of Directors Meeting open to AMSAT members

+ Meet Board Members and Officers

+ Annual General Membership Meeting

+ Annual Banquet Keynote Speaker and Door Prizes

If you are interested in a Monday Trip (October 29) to the Kennedy Space Center please contact Martha via email: martha at amsat.org.

The trip will include a round trip bus from the hotel and entrance to the Space Center. The cost will be about $100. This is a wonderful experience for those that haven't been and for those that have been multiple times. We need to get an idea of how many will participate to select the correct bus.

[ANS thanks Dan Schultz, N8FGV for the above information]

Japan to Launch Student High-Voltage Satellite Horyu-2 in May 2012

HORYU-2, an amateur radio satellite built by students at the Kyushu Institute of Technology (KIT) in Japan will launch aboard a Japanese H-IIA rocket planned for May 17 at 1639-1642 UT.

This Cubesat includes several experiments:
+ 300 volt power generation in LEO
+ COTS technology demonstration of surface potential measurement
+ Orbital debris observation
+ Earth photography

The satellite downlink will be 437.375 MHz using 1200bps FSK and CW.

300 volt power generation in LEO

Power generation in space in practice is limited to 160 volt generation with 120 volt transmission aboard the ISS due to electrostatic potential of the solar array with respect to its platform. High power generation will require heavier cables or increased loss due to resistances. Future high power generation in LEO will require 300-400 volts. The HORYU-2 mission, 300V power generation in space without any discharge, is the first space environment test of the new technology.

COTS technology demonstration of surface potential measurement
---
A contact surface potential meter developed by TREK, Inc. for terrestrial commercial application will be flown. This is a high impedance meter which will not affect the charge state of the object being tested. As HORYU-2 passes through the aurora zone, differential charges may develop between the insulator surface and the satellite chassis. The potential meter will measure the potential of the insulator that is the same material to be used for SCM. The two measurements are

compared to validate against each other.

Orbital debris observation

This experiment will detect micro-debris impact on the surface of HORYU-2. The debris sensor consists of many conductive thin wired laid down in parallel in the area of 8 8 cm. Upon impact, some of the lines are cut and the resistance becomes infinite.

Earth photography

A small CMOS camera, developed by the University of Surrey, called the Surrey Camera Payload (SCAMP) will take pictures in JPEG format at 640 480 pixels. From 700km altitude, one pixel will correspond to 1.6km.

More information is available on the web:
Horyu website in Google English: http://tinyurl.com/HoryuSatellite
http://www.uk.amsat.org/6638
http://www.uk.amsat.org/4279

[ANS thanks the Horyu-2 team and AMSAT-UK for the above information]

Satellite Export Controls - Progress Report

Since the inception of The International Traffic in Arms Regulations (ITAR) in 1999, all US-built satellites have been subject to the US Munitions List, including amateur radio, education and university satellite projects. The Directorate of Defense Trade Controls (DDTC) under the Department of State (DoS) manages ITAR. ITAR has curtailed AMSAT's collaboration with foreign nationals on Amateur Radio Satellite projects, as well as with universities that have foreign students enrolled as any technical exchanges concerning satellite technology with non-US citizens brought the potential for Federal prosecution.

On November 1, 2011, Congressman Howard L. Berman (D-CA) introduced H.R. 3288: "Safeguarding United States Satellite Leadership and Security Act." In summary, this act would authorize the President to remove commercial satellites and related components from the United States Munitions List. However, while AMSAT was pleased to see this draft bill, there were concerns that "commercial satellites" could be interpreted as not including amateur radio and education satellites.

Consequently, earlier this year AMSAT President Barry Baines, WD4ASW appointed AMSAT NY Area Coordinator Peter Portanova, WB2OQQ as AMSAT's Congressional Liaison to establish relationships that would put AMSAT on the radar regarding H.R. 3288 to ensure that amateur radio and education satellites would be included in the final bill. Peter's appointment was based in part on his success in lead-

ing a delegation to meet with Congressman Peter King on H.R. 607 in 2011 that resulted in the amendment of that bill to protect the amateur and amateur satellite frequencies that were being considered for auction. Peter was clearly qualified to lead AMSAT's efforts to ensure that amateur radio and education satellites would be included in such a bill. Peter notes, "What we accomplished on 607 validates that 'grass roots' efforts can be successful". Over the past few months, AMSAT, under Peter's guidance has taken steps to meet with key personnel involved in the legislative process in Washington to make them aware of AMSAT, the importance of amateur radio satellites in the development of education outreach and potential for emergency communications. All of these meetings have been successful in building awareness of the need to have amateur radio satellites (as well as education satellites) removed from the US Munitions List and placed under the Department of Commerce Control List.

While H.R. 3288 has been referred to the House Committee on Foreign Affairs, this initiative was being held up pending a joint report from the Department of Defense (DoD) and Department of State (DoS) required by Section 1248 of the FY2010 Defense Authorization Act wherein Congress directed DoD to assess whether national security would be negatively impacted by moving satellites from the US Munitions List (USML) to the Commerce Control List (CCL). Clearly, the politicians were awaiting this report before deciding whether to support H.R. 3288.

On April 18, 2012 the long awaited "1248" report was released by DoD and DoS: "Risk Assessment of United States Space Export Control Policy," that addresses the risks associated with removing satellites and related components from the United States Munitions List (USML).

The report identifies several satellite types, and related items, that are not purely defense-related and should not be designated as defense articles on the USML or controlled under the International Traffic in Arms Regulations (ITAR).

The Departments recommended that the following items are more appropriately designated as dual-use items on the Commerce Control List (CCL) and controlled under the Export Administration Regulations (EAR):

(1) Satellites that do not contain technologies unique to military applications or critical for maintaining a military edge;
(2) Communications satellites (COMSATs) that do not contain classified components;
(3) Remote sensing satellites with performance parameters below certain thresholds; and
(4) Systems, subsystems, parts and components associated with those satellites.

>From AMSAT's perspective, this is certainly good news for the satellite industry from both a commercial and amateur radio/education per-

spective. In particular, placement of amateur radio satellites under EAR would remove the most onerous impacts of ITAR, allowing for example, free exchange of technical information with foreign nationals, allowing collaboration on satellite projects. Actual export of hardware, however, would be controlled by the Department of Commerce. That said, it is too early to draw any conclusions as a 180-day review process has now begun. If the recommendations of the "1248 Report" are accepted, it could pave the way for H.R. 3288 or a bill drafted in response to the "1248 recommendations" to move forward. However, given the tendency of Congress to put off major decisions from May onward pending Fall elections, AMSAT President Barry Baines, WD4ASW believes that it is likely, based on the current Congress and other factors, very little will occur within the 112th Congress. In Barry's words, "We are pleased with our initiatives to this point; however these activities are still a work in progress." The AMSAT Board, along with AMSAT's Congressional Liaison, will stay focused on these activities and report to the membership as information becomes available.

The 44 page "Department of Defense/Department of State Report to Congress Section 1248 of the National Defense Authorization Act for Fiscal Year 2010 (Public Law 111 - 84): RISK ASSESSMENT OF UNITED STATES SPACE EXPORT CONTROL POLICY" is available on-line in PDF format at: http://tinyurl.com/DoD-1248-Report

Bloomberg Business Week article on ITAR:
http://tinyurl.com/BusinessWeek-ITAR (www.businessweek.com)

(ANS thanks AMSAT President Barry Baines, WD4ASW and AMSAT Congressional Liaison Peter Portanova, WB2OQQ for this report.)

New Proposal Cycle for ARISS-US Contacts

NASA Teaching From Space (TFS) office has announced a new proposal cycle for ARISS-US contacts. Proposals may be submitted in the time period between April 23 through July 2, 2012 for contacts that will be scheduled beginning in January 2013.

Informational sessions will be held to answer any questions concerning the proposal process. To attend a session or to have questions answered, contact TFS at JSC-TFS-ARISS@mail.nasa.gov or call 281-244-1919.

For more information, see the TFS Web site:
http://tinyurl.com/ARISS-Proposal-Cycle (www.nasa.gov)

If you represent an education organization, formal or informal, and you are located in the United States or its territories, you can submit a proposal.

If you are located outside of the U.S., you will need to contact
the ARISS representative for your region:

+ Europe, Africa, and the Middle East: Francesco De Paolis,
IK0WGF school.selection.manager@amsat.it.

+ Russia: Valeriy Agabekov, N2WW/UA6HZ n2ww@arrl.net.

+ Japan and all countries in Southeast Asia and Pacific Oceania:
Keigo Komuro, JA1KAB iaru-r3@jarl.or.jp.

+ Canada and all other countries: Maurice-Andr&#65533; Vigneault,
VE3VIG ve3vig@amsat.org.

[ANS thanks the NASA Teaching From Space Office for the above
information]

Satellite Shorts From All Over

+ The ARISS International Team monthly teleconference was held on
Tuesday, April 17. World Amateur Radio Day and the HamTV status
were discussed. Minutes have been posted to the ARISS site:
http://ariss.rac.ca/arisstel2012-04-17.htm

+ A video segment of the successful ARISS contact with Flabob
Airport will be aired on the Bob Heil & Gordon West "Ham Nation"
show on May 1, 2012 at 1800 PDT (UTC-7). Tune in at:
http://www.twit.tv/hn

+ ESA&#65533;s mysteriously silent Envisat Earth observing satellite has
been observed and imaged by another satellite in space. France&#65533;s
space agency (CNES) pulled off an on-orbit coup, using their high-
resolution Pleiades satellite to take a picture of Envisat from
about 100 km. See the satellite-to-satellite view at:
http://tinyurl.com/Envisat-Photo (www.universetoday.com)

+ For the last 1000 days the Infrared Array Camera (IRAC), aboard
NASA's Spitzer Space Telescope, has been operating continuously
to probe the universe from its most distant regions to our local
solar neighborhood. To commemorate 1000 days of infrared wonders,
the program is releasing a gallery of the 10 best IRAC images:
http://www.cfa.harvard.edu/news/2012/pr201211_images.html

+ In celebration of the 22nd anniversary of the NASA/ESA Hubble
Space Telescope this month, episode 54 of the Hubblecast gives
a slideshow of some of the best images from over two decades
in orbit, set to special music:
http://www.spacetelescope.org/videos/archive/category/hubblecast/

+ JD1/OG, OGASAWARA ISLAND, AS-031
Makoto,JI5RPT, is working from Chichijima Islands (IOTA AS-031)
signing JD1BLY in CW/SSB/digital modes on 80-6m and via satellite
also from April 29 until May 5. QSL via homecall.

See: http://www.ji5rpt.com/jd1 and http://twitter.com/jd1bly
(via DXNL DX Newsletter 1777 - Apr 25, 2012)

[ANS thanks everyone for the above information]

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In addition to regular membership, AMSAT offers membership in the President's Club. Members of the President's Club, as sustaining donors to AMSAT Project Funds, will be eligible to receive additional benefits. Application forms are available from the AMSAT Office.

Primary and secondary school students are eligible for membership at one-half the standard yearly rate. Post-secondary school students enrolled in at least half time status shall be eligible for the student rate for a maximum of 6 post-secondary years in this status. Contact Martha at the AMSAT Office for additional student membership information.

73,
This week's ANS Editor,
Lee McLamb, KU4OS

69. Weekly Highlights of Solar and Geomagnetic Activity, 23 - 29 April 2012

Newsgroup: rec.radio.amateur.space
Date: 2012-04-30 15:30:07 UTC
From: SWPC.Webmaster@noaa.gov
Message-ID: <20120430153001.F290D33C57@panix2.panix.com>
Source record: 119
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.dx,rec.radio.amateur.space,rec.radio.shortwave,rec.radio.info

```
:Product: Weekly Highlights and Forecasts
:Issued: 2012 Apr 30 0310 UTC
# Prepared by the US Dept. of Commerce, NOAA, Space Weather Prediction Center
# Product description and SWPC contact on the Web
# http://www.swpc.noaa.gov/weekly.html
#
# Weekly Highlights and Forecasts
#
Highlights of Solar and Geomagnetic Activity
23 - 29 April 2012

Solar activity was moderate because one M1/1N flare occurred on 27
April at 0821Z. Region 1466 (N12, L=40, class/area=Dso/190) produced
this, six C-class x-ray flares, and 13 optical flares throughout the
week. The remainder of the flare activity was confined to C-class
events. Region 1465 (S18, L=55, class/area=Dki/400) the most
prolific and the most magnetically complex of the 14 regions on the
disk, exhibiting beta-gamma-delta characteristics on 24 and 27
April. The largest region was Region 1460 (N16, L=109,
class/area=Dkc/490) which reached its maximum coverage on 21 April.
Solar activity was not confined to flares, several CMEs were
observed during the period.

On 23 April, A C2/Sf flare was observed from Region 1461 (N10, L=75,
plage) at 1747Z, accompanied by a Type II radio burst (1605 km/s). A
Halo-CME was subsequently observed in SOHO/LASCO coronagraph imagery
at 1848Z (C2) and 1906Z (C3). Plane of sky measurements suggested a
speed in the 400 to 500 km/s range. The next day, a
non-earth-directed CME emerged from the east limb after a C3 flare
at 0745Z from Region 1467 (N12, L=331,class/area=Dso/50). A Type II
radio sweep (estimated shock velocity of 1029 km/s) announced the
departure of this CME. CME production continued onWednesday when
Region 1460 produced a C1 x-ray flare/CME at 25/2242Z and Region
1465 followed with a C1 x-ray flare/CME at 26/1723Z. Several
non-earth-directed CMEs were observed emerging from the SW limb on
26-27 April. They all originated from old Region 1462 (S25, L=139,
class/area=Dho/300) which rotated off the visible disk on the 24th.
A16 degree filament eruption was observed in SDO/AIA 304 imagery at
28/1045Z. During the eruption, the SE to NW oriented filament was
centered near S32W33. LASCO/C2 imagery captured a subsequent
slow-moving, non-earth-directed CME emerging from the SW limb at
28/1224Z. GONG H-alpha and SDO/AIA 304 imagery depicted a filament
eruption along a six degree long channel centered near N06E36, just
to the SE of Region 1467. This eruption occurred between 28/1800 -
```

2000Z with several CMEs observed during the period.

No proton events were observed at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit reached high levels on 25 April and remained at mostly high levels through the rest of the period.

Geomagnetic field activity ranged from quiet to major storm levels during the week. On 23/0200Z, data from the ACE spacecraft indicated the arrival of a CME from 19 April. Solar wind speed increased from 350 to 400 km/s and the total IMF approached 18 nT. The Boulder magnetometer recorded a 31 nT sudden impulse at 23/0325Z. Active to minor storm levels followed. IMF Bz at the ACE spacecraft lurked in the -10 to -15 nt range for 12 hours beginning around 23/16Z. By 24 April, activity reached major storm levles at mid latitudes during the 00-03Z period as effects from the CME were compounded by the arrival of a coronal hole high speed stream (CH HSS) around 0200Z. On the 25th, activity at high latitudes reached severe storm levels during the 06-09Z synoptic period. The high speed stream peaked near 777 km/s on the 25th around 19Z then began a steady decline. Geomagnetic field activity subsided to unsettled levels on 27 April and quiet levels on 28-29 April. Late on the 27th, a slight bump in the wind speed at ACE suggested the arrival of the remnants of the CME from 23 April, however the geomagnetic field response was muted.

Forecast of Solar and Geomagnetic Activity
30 April - 26 May 2012

Solar activity is expected to be low with a chance for moderate events through the forecast period.

No proton events are expected at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit is expected to be at high levles 30 April, 11-14 May and 23-26 May.

Geomagnetic field activity is expected to be quiet with the exception of active periods on 9-11 May and 20-23 May associated with recurrent coronal hole high speed streams.

70. Crossposting Permitted to rec.radio.amateur.moderated

Newsgroup: rec.radio.amateur.space
Date: 2012-05-01 06:00:01 UTC
From: rram@panix.com
Message-ID: <radio/ham-radio/moderated/crossposting-1-1335852000@panix.com>
Source record: 120
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space,rec.radio.info

```
Posted-By: auto-faq 3.3.2 beta (PGPMoose V2.0, Perl 5.005)
Archive-name: radio/ham-radio/moderated/crossposting
Revision: 1.2 2011/11/02 04:08:53
Posting-Frequency: posted monthly
URL: http://www.panix.com/~rram/usenet/rram/index.html

Changes followed by "|".

After a 30-day public discussion and feedback period to gauge reader
opinions in March of 2009:

http://groups.google.com/group/rec.radio.amateur.moderated/browse_thread/thread/d7d337db35
f23326

the rec.radio.amateur.moderated Moderation Team had decided to consider |
amending its charter, and permit limited simultaneous crossposting to
rec.radio.amateur.moderated and one other unmoderated
amateur-radio-related discussion newsgroup. After a successful trial |
period (90 days, through early July 2009), we decided to adopt this |
change permanently. |

Approved rec.radio.amateur.* newsgroups are those that are currently
listed in the latest version of the "List of Big Eight Newsgroups" which
is crossposted monthly to news.announce.newgroups, news.groups, and
news.lists.misc.

Approved alt.radio.amateur.* and alt.ham-radio.* newsgroups are those
that have been created consistent with the suggestions in "So You Want
to Create an Alt Newsgroup" at:

http://www.faqs.org/faqs/alt-creation-guide/

Approved regional hierarchy newsgroups are those that contain either
"radio.amateur" or "ham-radio" in their names, including
uk.radio.amateur and aus.radio.amateur.misc.

We will make every reasonable effort to keep our list of approved
newsgroups up-to-date. In case we have overlooked any, and a submission
is rejected in error as a result, the rejected submitter can E-mail us
at our administrative contact address (in the signature at the bottom of
this article, and the default Reply-To for the rejection message)
requesting that it be added, and that the article be approved. We may
still choose to reject articles crossposted to any alt.* newsgroup with
an inappropriate name, including obscene language, embedded
name-calling, or encouragement of unlawful conduct.
```

Please direct any comments, questions, or criticisms to
rec-radio-amateur-moderated-request@panix.com.

71. WSR-121 AMSAT Weekly Satellite Report

Newsgroup: rec.radio.amateur.space
Date: 2012-05-01 13:43:00 UTC
From: JoAnne Maenpaa <k9jkm@comcast.net>
Message-ID: <001501cd27a0$49d3f290$dd7bd7b0$@net>
Source record: 121
Cross-posted to: rec.radio.amateur.space,rec.radio.info

```
This report is organized into three (3) parts.
Part 1 (S1) - operational analog amateur satellites
Part 2 (S2) - operational digital amateur satellites
Part 3 (S3) - non - operational satellites

SB SAT @ AMSAT W8ISS $WSR-121.S1
WSR 121 Part 1 04/30/2012

AMSAT NEWS SERVICE BULLETIN 121.S1
FROM AMSAT HQ SILVER SPRING, MD, April 30, 2012
TO ALL RADIO AMATEURS
BID: $WSR-121.S1

PW-Sat
Catalog Number:
Launch Date: Febrauary 13, 2012
Launch Site: Kourou, French Guiana

Status: On Orbit

Uplink: 435.020 MHz FM
Downlink: 145.900 MHz DSB

Beacon:

Callsign:

URL:
```

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum2
[03162012]
��DO-64 Delfi-C3
Catalog number: 32789
Launch Date: April 28, 2008 0354z
Launch site: Satish Dhawan Space Centre, India

```
Status: Operational
Current Mode: Science Mode - Beacon ONLY

Telemetry: 145.870 MHz

Downlink: 145.880 to 145.920 MHz
Uplink: 435.530 to 435.570 MHz

Delfi-C3 web page: http://www.delfic3.nl/
```

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnumh
[02092011]
��VO-52 HAMSAT
Catalog number: 28650
Launch Date: May 05, 2005 0444z
Launch site: Satish Dhawan Space Centre, India

Status: Operational
Current Mode: U/v - Dutch Transponder

Frequencies:
Indian Transponder:
Uplink: 435.220 to 435.280 MHz LSB/CW
Downlink: 145.930 to 145.870 MHz USB/CW

Dutch Transponder:
Uplink: 435.225 to 435.275 MHz LSB/CW
Downlink: 145.925 to 145.875 MHz USB/CW

Indian Beacon: 145.9360 MHZ CW
Dutch Beacon: 145.860 MHz 12WPM with CW message

Mode and Antenna Polarization:
V: LHCP
U: RHCP

Official Webpage: http://www.amsatindia.org/hamsat.htm

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum0

To know what transponder is switched on please listen for the beacon
that is active. Each transponder has a different beacon.
[03232012]
��SO-50 SAUDISAT-1C
Catalog number: 27607
Launch date: December 20, 2002 1700z
Launch site: Baikonur, Kazakhstan

Status: Operational

Current Mode: V/u

Uplink: 145.850 MHz FM - 67.0 Hz PL tone
Downlink: 436.795 MHz

Mode and Antenna Polarization:
V: Linear
U: Linear

Official Webpage: http://saudisat.kacst.edu.sa/index.shtml
(not up and running currently)

To switch the transmitter on, you need to send a CTCSS tone of 74.4 Hz. The order of operation is thus: (allow for Doppler as necessary):
1) Transmit on 145.850 MHz with a tone of 74.4 Hz to arm the 10 minute timer on board the spacecraft.
2) Now transmit on 145.850 MHz (FM Voice) using 67.0 Hz to PT the repeater on and off within the 10 Minute window.
3) Sending the 74.4 tone again within the 10 minute window will reset the 10 minute timer.
[02092011]
��FO-29 JAS-2
Catalog number: 24278
Launch Date: August 17, 1996

Status: Operational
Current Mode: V/u (Mode JA)

Voice/CW (Mode JA)
Uplink: 145.90 to 146.00 MHz CW/LSB
Downlink: 435.80 to 435.90 MHz CW/USB
Beacon: 435.795 MHz

Digital Mode JD
Uplinks: 145.850 MHz FM
145.870 MHz FM
145.910 MHz FM
Downlink: 435.910 MHz 1200-baud BPSK or 9600-baud FSK
Callsign: 8J1JCS
Digitalker: 435.910 MHz

Mode and Antenna Polarization:
V: RHCP
U: RHCP

For current operational schedule for FO-29:
http://www.ne.jp/asahi/m-arai/gkz/satinfo/fo29e.htm

JARL English webpage:
http://www.jarl.or.jp/English/5_Fuji/ejasmenu.htm

AMSAT-NA Webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID
�retURL�atellites/status.php

Mineo Wakita, JE9PEL, has created a simple decoder program for FO29's CW telemetry downlink: http://www.ne.jp/asahi/hamradio/je9pel/fo29cwts.htm
[01122012]
��AO-27 AMRAD
Catalog number: 22825
Launch date: September 26, 1993 0140z
Launch site: Kourou, French Guiana

Status: Operational

Current Mode: V/u

Uplink: 145.850 MHz FM
Downlink: 436.797 MHz FM

Mode and Antenna Polarization:
V: Linear
U: Linear

Official Webpage: http://www.ao27.org
[02092011]
��AO-7 AMSAT OSCAR 7
Catalog number: 07530
Launch Date: November 15, 1974
Launch site: Vandenberg AFB, California, USA

Status: Operational

Current Mode: Alternating between Mode A and B every 24 hours

Uplink: 145.850 to 145.950 MHz CW/USB Mode A
432.125 to 432.175 MHz CW/LSB Mode B
Downlink: 29.400 to 29.500 MHz CW/USB Mode A (1W PEP)
145.975 to 145.925 MHz CW/USB Mode B (8W PEP)
145.975 to 145.925 MHz CW/USB Mode C (2W PEP)
Beacons: 29.502 MHz CW
145.972 MHz CW
435.100 MHz CW
2304.100 MHz CW

Official Webpage:
http://www.amsat.org/amsat-new/satellites/sat_summary/ao7.php
[04242012]
��INTERNATIONAL SPACE STATION (ISS) - ARISS
Catalog number: 25544
Launch date: November 20, 1998 0640z (ZARYA module)
Launch sites: Baikonur, Kazakhstan
Kourou, French Guiana
Uchinoura Space Center, Japan
Kennedy Space Center, Titusville, Florida, USA

Status: Operational

Current Active Modes: FM Repeater - OFF
Voice - V/v
BBS - OFF
2m APRS - ON
70cm Digi - ON
SSTV - OFF

Expedition 31 Crew (April 2012 - July 2012):
Commander: Oleg Kononenko RN3DX
Flight Engineer: Andr� Kuipers PI9ISS
Flight Engineer: Don Pettit KD5MDT

Flight Engineer:
Flight Engineer:
Flight Engineer:

Available Modes and Frequencies:
Digital/APRS:
Worldwide 2m packet uplink: 145.825 MHz FM 1k2
Worldwide 2m packet downlink: 145.825 Mhz FM 1k2
Worldwide 70cm packet downlink: 437.550 Mhz FM 1k2
Worldwide 70cm packet downlink: 437.550 Mhz FM 1k2

Voice:
Region 1 voice uplink: 145.200 MHz FM
Region 2/3 voice uplink: 144.490 MHz FM
Worldwide downlink: 145.800 MHz FM

Crossband Repeater:
Repeater Uplinks: 1269.650 MHz FM
437.800 MHz FM
145.990 MHz FM - 67.0 PL (Kenwood)
Repeater Downlink: 145.800 MHz FM
437.800 MHz FM (Kenwood)

SSTV Robot 36:
Downlink: 145.800 MHz FM

Mode and Antenna Polarization:
V: Linear
U: Linear

Callsigns:
Belgian: OR4ISS
German: DP0ISS
Russian: RS0ISS
RZ3DZR
United States: NA1SS
2m Packet Mailbox: RS0ISS-11
2m Digipeater alias: ARISS
70cm Packet Mailbox: RS0ISS-1
70cm Digipeater callsign: RS0ISS
70cm Digipeater alias: ARISS

Official ARISS Webpage: http://www.rac.ca/ariss
ISS Fan Club Webpage: http://www.issfanclub.com
APRS tracking page: http://www.ariss.net/

ISS Daily Crew Schedule: http://spaceflight.nasa.gov/station/timelines
Remember that the crew operates on UTC time. Also, all of the time
line is NOT translated from Russian and posted.
[04302012]
NNNN
/EX

SB SAT @ AMSAT W8ISS $WSR-121.S2
WSR 121 Part 2 04/30/2012

AMSAT NEWS SERVICE BULLETIN 121.S2
FROM AMSAT HQ SILVER SPRING, MD, April 30, 2012
TO ALL RADIO AMATEURS
BID: $WSR-121.S2

XaTcobeo
Catalog Number: 38082
Launch Date: Febrauary 13, 2012
Launch Site: Kourou, French Guiana

Status: Operational

Uplink:
Downlink: 437.365 MHz FFSK with AX.25

Beacon:

Callsign:

URL:

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum5
[03162012]
��UniCubeSat
Catalog Number:
Launch Date: Febrauary 13, 2012
Launch Site: Kourou, French Guiana

Status: Operational

Uplink:
Downlink: 437.305 MHz 9k6 bps FSK

Beacon:

Callsign:

URL:

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum3
[03162012]
��Robusta
Catalog Number:
Launch Date: Febrauary 13, 2012
Launch Site: Kourou, French Guiana

Status: On Orbit

Uplink:
Downlink: 437.325 MHz 1k2 FM telemetry (data every 1 min, 20 sec. burst)

Beacon:

Callsign:

URL:

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum2
[02142012]
��MO-72 MaSat-1
Catalog Number: 38081
Launch Date: Febrauary 13, 2012
Launch Site: Kourou, French Guiana

Status: Operational

Uplink:
Downlink: 437.345 MHz GFSK 625/1250 bps
437.345 MHz CW

Beacon:

Callsign:

URL:

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum6
[03232012]
��Goliat
Catalog Number: 38085
Launch Date: Febrauary 13, 2012
Launch Site: Kourou, French Guiana

Status: Operational

Uplink:
Downlink: 437.485 MHz 1k2 AFSK

Beacon:

Callsign:

URL:

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum�
[03162012]
��E-Star
Catalog Number: 38079
Launch Date: Febrauary 13, 2012
Launch Site: Kourou, French Guiana

Status: On Orbit

Uplink:
Downlink: 437.445 MHz 1k2 bps AFSK

Beacon:

Callsign:

URL:

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum0
[03232012]
��ALMASat1
Catalog Number: 38078
Launch Date: Febrauary 13, 2012
Launch Site: Kourou, French Guiana

Status: On Orbit

Uplink:
Downlink: 437.465 MHz 1k2 bps FSK
2407.850 MHz

Beacon:

Callsign:

URL:

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum9
[02212012]
��RS-39 Chibis-M
Catalog Number: 37841
Launch Date: October 30, 2011 10:11:00 UTC
Launch site: Tyuratam (Baikonur Cosmodrome), Kazakhstan

Status: Operational

Uplink:
Downlink:

Beacon: 435.315 MHz CW
435.215 MHz CW

Callsign:

URL:

IARU coordination status page:
[01122012]
��JUNGU
Catalog Number: 37841
Launch Date: October 12, 2011 05:30:00 UTC
Launch site: Satish Dhawan Space Centre, India

Status: On Orbit

Uplink: 145.??? MHz 1k2 (mode?)
Downlink: 437.505 MHz 9k6 (mode?)

Beacon: 437.275 MHz 15 wpm (?) CW

Callsign:

URL: http://www.iitk.ac.in/me/jugnu/index.htm

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum0
[01122012]
��SRMSAT
Catalog Number: 37839
Launch Date: October 12, 2011 05:30:00 UTC
Launch site: Satish Dhawan Space Centre, India

Status: On Orbit

Uplink: 145.900 MHz 1k AX.25 (speed?)
Downlink: 437.500 MHz 2k4 AX.25

Beacon: 437.425 MHz 12 wpm CW

Callsign:

URL: http://srmsat.in/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum1
[01122012]
��HRBE (E1P Explorer 1 [Prime] CubeSat (E1P-U2))
Catalog Number: 37855
Launch Date: October 28, 2011
Launch site: Vandenberg Air Force Base, California, USA

Status: On Orbit

Uplink: 437.305 MHz (???)
Downlink: 437.505 MHz AX.25 (SSB?)

Beacon:

Callsign:

URL: http://ssel.montana.edu/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum6
[01122012]
��M-Cubed
Catalog Number: 37855
Launch Date: October 28, 2011
Launch site: Vandenberg Air Force Base, California, USA

Status: On Orbit

Uplink:
Downlink: 437.485 MHz AX.25

Beacon:

Callsign:

URL: http://umcubed.org/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum!5
[01122012]
��RAX-2
Catalog Number: 37853
Launch Date: October 28, 2011
Launch site: Vandenberg Air Force Base, California, USA

Status: Operational

Uplink:
Downlink: 437.345MHz 9k6 GMSK

Beacon:

Callsign:

URL: http://rax.engin.umich.edu//

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum"1
[03232012]
��AO-71 AubieSat-1
Catalog Number: 37854
Launch Date: October 28, 2011
Launch site: Vandenberg Air Force Base, California, USA

Status: On Orbit

Uplink:
Downlink: 437.475 MHz 1k2 AX.25

Beacon: 437.475 MHz CW

Callsign: KI4NQO

URL: http://www.space.auburn.edu/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum8
[12262011]
��O/OREOS
Catalog Number: 37224
Launch Date: November 20, 2010
Launch site: Kodiak Launch Complex, Alaska, USA

Status: On Orbit

Uplink:
Downlink: 437.035 MHZ AX.25

Beacon:

Callsign:

URL: http://www.ooreos.org/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum6
[02092011]
��Rax-1 Radio Aurora Explorer
Catalog Number: 37223
Launch Date: November 20, 2010
Launch site: Kodiak Launch Complex, Alaska, USA

Status: On Orbit

Uplink:
Downlink: 437.505 MHz 9k6 GMSK

Beacon:

Callsign: RAX-1

URL: http://rax.engin.umich.edu/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum5
[02092011]
��FO-69 Fastrac-1 Sara Lily
Catalog Number: 37227
Launch Date: November 20, 2010
Launch site: Kodiak Launch Complex, Alaska, USA

Status: Operational

Uplink 1: 145.980 MHz 1k2 baud
Uplink 2: 145.825 MHz 1k2 baud
Downlink: 437.345 MHz 1k2 and 9k6 baud

Beacon: 437.435 MHz 1k2 AX.25

Callsign: Fast1

URL: http://fastrac.ae.utexas.edu/index.php

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum�
[07052011]
��FO-70 Fastrac-2 Emma
Catalog Number: 37380
Launch Date: November 20, 2010

Launch site: Kodiak Launch Complex, Alaska, USA

Status: Operational

Uplink 1: 435.025 MHz 1k2 baud
Uplink 2: 437.435 MHz 9k6 baud
Downlink: 145.825 MHz 1k2 and 9k6 baud

Beacon: 145.825 MHz 1k2 AX.25

Callsign: Fast2

URL: http://fastrac.ae.utexas.edu/index.php

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=
[12162011]
==StudSat
Catalog Number: 36796
Launch Date: July 12, 2010 0352z
Launch site: Satish Dhawan Space Centre, India

Status: On Orbit

Uplink: 437.505MHz, 9600bps FSK
Downlink: 437.505MHz, 9600bps FSK
Beacon : 437.505MHz, 20bps ASK

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum4
[02092011]
==TIsat-1
Catalog Number: 36799
Launch Date: July 12, 2010 0352z
Launch site: Satish Dhawan Space Centre, India

Status: On orbit

Callsign: HB9DE

Uplink: 145.980MHz FM, AFSK
Downlink: 437.305MHz FM, AFSK
Beacon: 437.305MHz CW

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum8
[02092011]
==SwissCube
Catalog Number: 35932
Launch Date: September 23, 2009 0621z
Launch site: Satish Dhawan Space Centre, India

Status: Operational

Callsign: HB9EG

Beacon(100mw): 437.5050MHz CW
Beacon(1w): 437.5050MHz FSK 1k2bps

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum9
[02092011]
��UWE-2
Catalog Number: 35934
Launch Date: September 23, 2009 0621z
Launch site: Satish Dhawan Space Centre, India

Status: In Orbit

Beacon(500mw): 437.3850 MHz AFSK 1k2bps
437.3850 MHz FSK 9k6bps

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum0
[02092011]
��ITUpsAT1
Catalog Number: 35935
Launch Date: September 23, 2009 0621z
Launch site: Satish Dhawan Space Centre, India

Status: Operational

Beacon(100mw): 437.325MHz CW
Beacon(1w): 437.325MHz 19k2bps

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum3
[02092011]
��BEESAT
Catalog Number: 35933
Launch Date: September 23, 2009 0621z
Launch site: Satish Dhawan Space Centre, India

Status: Operational

Callsign: DP0BEE

Beacon(100mw): 436.000MHz CW
Beacon(500mw): 436.000MHz GMSK 4k8bps
Beacon(500mw): 436.000MHz GMSK 9k6bp
[02092011]
��CP-6
Catalog Number: 35004
Launch Date: May 19, 2009 2355z
Launch site: Wallops Island, Virginia, USA

Status: Operational

Downlink: 437.365 MHz 1k2 AFSK

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum1
[01122012]
��HAWKSAT 1
Catalog number: 35003
Launch Date: May 19, 2009 2355z
Launch site: Wallops Island, Virginia, USA

Status: operational

Downlink: 437.345 MHz ?

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum5
[01122012]
��Pharmasat
Catalog Number: 35002
Launch Date: May 19, 2009 2355z
Launch site: Wallops Island, Virginia, USA

Status: Operational

Downlink: 437.465 MHz 1k2 AFSK

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum�
[02092011]
��ANUSAT
Catalog Number: 34808
Launch Date: April 20, 2009 0115z
Launch Site: Satish Dhawan Space Centre, India

Status: ?

Downlink: 435.000 MHz
Uplink: 145.800 MHz

Telemetry: 137.400 MHz
[02092011]
��SOHLA-1 (ASTRO TECH.)
Catalog Number: 33496
Launch Date: January 23, 2009 0354z
Launch site: Tanegashima Space Center, Japan

Status: Operational

Proposed Frequencies and Modes:
Downlink: 437.505 MHz AFSK/CW
Beacon: 437.505 MHz AFSK/CW

Callsign:

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum1
[02092011]

��KAGAYAKI (Solan Co.)
Catalog Number: 33495
Launch Date: January 23, 2009 0354z
Launch site: Tanegashima Space Center, Japan

Status: In Orbit

Downlink: 437.375 MHZ FSK9k6/CW
Beacon: 437.375 MHz FSK9k6/CW

IARU coordination status page:

AMSAT-NA webpage:

[02092011]
��STARS (Kagawa Univ.) (Twin Satellites)
Catalog Number: 33498
Launch Date: January 23, 2009 0354z
Launch site: Tanegashima Space Center, Japan

Status: Operational ?

Downlinks: 437.485 MHz FM/CW
437.465 MHz FM/CW
Beacons: 437.305 MHz FM/CW
437.275 MHz FM/CW

Callsigns: JR5YBN
JR5YBO

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum�

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID1&retURL
�atellites/status.php
[02092011]
��KKS-1 (Tokyo MCIT)
Catalog Number: 33499
Launch Date: January 23, 2009 0354z
Launch site: Tanegashima Space Center, Japan

Status: Operational

Downlink: 437.455 MHz AFSK/CW
Beacon: 437.385 MHz AFSK/CW

Callsign: JQ1YYY

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum7

AMSAT-NA webapge:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID0&retURL

�atellites/status.php
[20092011]
��PRISM (Tokyo Univ.)
Catalog Number: 33493
Launch Date: January 23, 2009 0354z
Launch site: Tanegashima Space Center, Japan

Status: Operational ?

Downlink: 437.425 MHz AFSK/GMSK/CW
Beacon: 437.250 MHz AFSK/GMSK/CW

Callsign: JQ1YCX

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum�

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID9&retURL
�atellites/status.php
[02092011]
��RS-30 Radio Sputnik 30 (Yubileiny)
Catalog Number: 32953
Launch Date: May 23, 2008 1520z
Launch site: Plesetsk Missile and Space Complex, Russia

Status: Operational

Curent Modes: Telemetry
Audio
Images

Downlinks: 435.315 MHz
435.215 MHz

AMSAT-NA website:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID5&ret
URL�atellites/status.php

Official website:
http://www.npopm.com/?cid�oca&caidC
[02092011]
��CanX-2
Catalog number: 32790
Launch Date: April 28, 2008 0354z
Launch site: Satish Dhawan Space Centre, India

Status: Operational in range of ground station only

Downlink: 437.478 MHz GFSK

For the latest project status update please visit the Can X-2 web
page: http://www.utias-sfl.net/nanosatellites/CanX2/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnumF
[02092011]
��AAUSAT-II
Catalog number: 32788
Launch Date: April 28, 2008 0354z
Launch site: Satish Dhawan Space Centre, India

Status: Operational

Downlink: 437.425 MHz 1k2 baud packet

For the latest project status update please visit the AAUSAT-II web
page:
http://www.aausatii.aau.dk/homepage/index.php?language&page&me

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum`
[02092011]
��CO-65 CUTE-1.7+APD II
Catalog number: 32785
Launch Date: April 28, 2008 0354z
Launch site: Satish Dhawan Space Centre, India

Status: Operational

Downlink: 437.475 MHz 9k6 Packet
Uplink: 1267.600 Mhz

Telemetry Beacon:
Downlink: 437.2750 MHz CW

For the latest project status update please visit the Cute-1.7+APD II
web page: http://lss.mes.titech.ac.jp/ssp/cute1.7/index_e.html

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnumx

Command Station blog website:
http://lss.mes.titech.ac.jp/ssp/cute1.7/blog/

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID2&retURL
atellites/status.php
[03232012]
��Compass-1
Catalog number: 32787
Launch Date: April 28, 2008 0354z
Launch site: Satish Dhawan Space Centre, India

Status: Operational

Current Mode: dependant on last received command

Uplink: 145.980 MHz FM
Downlink: 437.275 Mhz CW
437.405 MHz Packet

For the latest project status update please visit the Compass 1 web
page: http://www.raumfahrt.fh-aachen.de/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnumR

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID4&retURL
�atellites/status.php
[06162011]
��CO-66 Seeds II
Catalog number:
Launch Date: April 28, 2008 0354z
Launch site: Satish Dhawan Space Centre, India

Status: Operational

Downlink: 437.485 MHz

Callsign: JQ1YGU

For the latest project status update please visit the Seeds 2 web
page: http://cubesat.aero.cst.nihon-u.ac.jp/english/seeds_2_e.html

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum6

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID3&retURL
�atellites/status.php
[02092011]
��CAPE-1
Catalog Number: 31130
Launch Date: April 17,2007 0702z
Launch site: Baikonur, Kazakhstan

Status: Intermittent

Current Mode: /u

TLM Downlink: 435.245 MHz 9600 bs FSK AX.25
CW Beacon: 435.245 MHz CW

Callsign: K5USL

TLM and CW interchange every 30 seconds.

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID�&retURL
/satellites/status.php

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnumr
[02092011]
��CP3
Catalog Number: 31129
Launch Date: April 17,2007 0702z
Launch site: Baikonur, Kazakhstan

Status: Operational

Current Mode: /u

Downlink: 436.845 MHz 1200 bps AFSK AX.25

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnumt
[02092011]
��CO-58 CubeSat XI-V
Catalog number: 28895
Launch Date: October 27, 2005 0652z
Launch site: Plesetsk Missile and Space Complex, Russia

Status: Operational - CW Beacon only

Current Mode: /u

Telemetry Downlink: 437.4250 MHz AFSK 1200bps using AFK protocol
Beacon: 437.2750 MHz CW

Callsign: JQ1YGW

Official Webpage: http://www.space.t.u-tokyo.ac.jp/cubesat/mission/V/

Pictures received by Mineo Wakita - JE9PEL:
http://www.ne.jp/asahi/hamradio/je9pel/xivpicte.htm

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum7
[02092011]
��CO-57 CubeSat XI-IV
Catalog number: 27848
Launch date: June 30, 2003 1415z
Launch site: Plesetsk Missile and Space Complex, Russia

Status: ?????

Current Mode: /u

Beacon: 436.8475 MHz CW
Telemetry : 437.4900 MHz AFSK 1200 BPS

Callsign: JQ1YGW

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID�&retURL
�atellites/status.php

Official Webpage: http://www.space.t.u-tokyo.ac.jp/cubesat/mission/V/
[02092011]
��QuakeSat
Catalog Number: 27845
Launch Date: June 30, 2003 1415z
Launch site: Plesetsk Missile and Space Complex, Russia

Status: Telemetry only

Current Mode: 9600 baud data packet

Mode U packet
Downlink: 436.675 MHz 9k6 BPS

Quakesat webpage:
http://www.quakefinder.com/services/quakesat-ssite/
[02252011]
��CO-55 Cute-1.7+APD II
Catalog Number: 27844
Launch date: June 30, 2003 1415z
Launch site: Plesetsk Missile and Space Complex, Russia

Status: Operational

Current Mode: CW downlink worldwide
AX25 Packet with uplink command over Japan only

Mode U Telemetry
Downlink: 437.4000 MHz AFSK 1200 BPS

Mode U TLM Beacon
Downlink: 436.8375 MHz CW

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satIDi&retURL
�atellites/status.php

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnumx
[02092011]
��NO-44 PCSAT
Catalog number: 26931
Launch Date: September 30, 2001 0240z
Launch site: Kodiak Launch Complex, Alaska, USA

Status: Telemetry only

Current Mode: V/v

General Usage Uplink/Downlink: 145.827 MHz 1200 Baud
Special Usage Downlink: 144.390 Mhz 1200 Baud

PCSAT APRS page: http://pcsat.aprs.org

aprstlm Telemetry Decoder program:
http://www.xciv.org/~iain/aprstlm/v1.2/
[02092011]
��RS-22 RADIO SPORT 22 (MOZHAYETS 4)
Catalog number: 27939
Launch Date: September 27, 2003 0612z
Launch site: Plesetsk Missile and Space Complex, Russia

Status: Operational - 70cm cw only

Current Mode: /u

CW Beacon - 435.352 MHz
145.818 MHz

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satIDv&retURL
�atellites/status.php
[02092011]
��LO-19 LUSAT
Catalog number: 20442
Launch date: January 22, 1990
Launch site: Kourou, French Guiana

Status: CW Beacon only

Uplinks: 145.840 MHz 1200-baud Manchester FSK
145.860 MHz 1200-baud Manchester FSK
145.880 MHz 1200-baud Manchester FSK
145.900 MHz 1200-baud Manchester FSK

CW downlink: 437.125 MHz

Digital downlink: 437.150 MHz SSB (RC-BPSK 1200-baud PSK)

Broadcast Callsign: LUSAT-11
BBS: LUSAT-12

General information and telemetry samples can be found at:
www.telecable.es/personales/ea1bcu
[02092011]
��UO-11 OSCAR-11
Catalog number: 14781
Launch Date: March 1, 1984
Launch site: Vandenburg AFB, California, USA

Status: Operational ?

Current Mode: /v

Telemetry Downlink: 145.825 MHz FM 1200 AFSK
UHFBeacon: 435.025 MHz
Mode-S Beacon: 2401.500 MHz

Mode and Antenna Polarization:
V: RHCP
S: LHCP

Webpage: http://www.users.zetnet.co.uk/clivew/
MPEG3 files: http://www.ne.jp/asahi/hamradio/je9pel/uo11tlme.htm
[07052011]
��INTERNATIONAL SPACE STATION (ISS) - ARISS
Catalog number: 25544
Launch date: November 20, 1998 0640z (ZARYA module)
Launch sites: Baikonur, Kazakhstan
Kourou, French Guiana
Uchinoura Space Center, Japan
Kennedy Space Center, Titusville, Florida, USA

Status: Operational

Current Active Modes: FM Repeater - OFF
Voice - V/v
BBS - OFF
2m APRS - ON
70cm Digi - ON
SSTV - OFF

Expedition 30 Crew (November 2011 - July 2012):
Commander: Oleg Kononenko RN3DX
Flight Engineer: Andr� Kuipers PI9ISS
Flight Engineer: Don Pettit KD5MDT
Flight Engineer:
Flight Engineer:
Flight Engineer:

Available Modes and Frequencies:
Digital/APRS:
Worldwide 2m packet uplink: 145.825 MHz FM 1k2
Worldwide 2m packet downlink: 145.825 Mhz FM 1k2
Worldwide 70cm packet downlink: 437.550 Mhz FM 1k2
Worldwide 70cm packet downlink: 437.550 Mhz FM 1k2

Voice:
Region 1 voice uplink: 145.200 MHz FM
Region 2/3 voice uplink: 144.490 MHz FM
Worldwide downlink: 145.800 MHz FM

Crossband Repeater:
Repeater Uplinks: 1269.650 MHz FM
437.800 MHz FM
145.990 MHz FM - 67.0 PL (Kenwood)
Repeater Downlink: 145.800 MHz FM
437.800 MHz FM (Kenwood)

SSTV Robot 36:
Downlink: 145.800 MHz FM

Mode and Antenna Polarization:
V: Linear
U: Linear

Callsigns:
Belgian: OR4ISS
German: DP0ISS
Russian: RS0ISS
RZ3DZR
United States: NA1SS
2m Packet Mailbox: RS0ISS-11
2m Digipeater alias: ARISS
70cm Packet Mailbox: RS0ISS-1
70cm Digipeater callsign: RS0ISS
70cm Digipeater alias: ARISS

Official ARISS Webpage: http://www.rac.ca/ariss
ISS Fan Club Webpage: http://www.issfanclub.com
APRS tracking page: http://www.ariss.net/

ISS Daily Crew Schedule: http://spaceflight.nasa.gov/station/timelines
Remember that the crew operates on UTC time. Also, all of the time
line is NOT translated from Russian and posted.
[04302012]
NNNN
/EX

SB SAT @ AMSAT W8ISS $WSR-121.S3
WSR 121 Part 3 04/30/2012

AMSAT NEWS SERVICE BULLETIN 121.S3
FROM AMSAT HQ SILVER SPRING, MD, April 30, 2012
TO ALL RADIO AMATEURS
BID: $WSR-121.S3

THE FOLLOWING ARE IN ORBIT BUT ARE NON-OPERATIONAL AT THIS TIME:

NANOSAIL-D
Catalog Number: 37361(?)
Ejection Date: January 17, 2011

Status: Non - Operational

Downlink: 437.270 MHz AX.25

URL: http://nanosaild.engr.scu.edu/dashboard.htm

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum5
[04302012]
��HO-68 HOPE-1 (CAS-1)(XW-1)
Catalog Number: 36122
Launch Date: December 15, 2009 0231z
Launch site: Taiyuan Space Center, PRC

Status: Telemetry only

Callsign:
Broadcast: BJ1SA-11
BBS: BJ1SA-12

Uplinks: 145.8250 MHz FM, PL 67.0 Hz.
145.9250 - 145.9750 MHz SSB/CW
145.8250 MHz AFSK 1200 BPS
Downlinks: 435.6750 MHz FM
435.7650 - 435.7150 MHz SSB/CW
435.6750 MHz AFSK 1200 BPS

Beacon: 435.7900 MHz CW

Mode and Antenna Polarization:
V: LHCP 2.0dBi max
U: RHCP 3.0dBi max

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum8

For more information about XW-1 (CAS-1):
http://
[04302012]
��SO-67 SumbandilaSat
Catalog Number: 35870
Launch Date: September 17, 2009 1555z
Launch site: Baikonur, Kazakhstan

Status: Non - Operational

Callsign: ZS0SUM

Uplink: 145.875MHz FM tone 233.6 Hz
Downlink: 435.345MHz FM

Mode and Antenna Polarization:
V: Linear
U: Linear

For more information about SO-67:
http://www.amsatsa.org.za/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum�
[01272012]
��CP4
Catalog Number: 31132
Launch Date: April 17, 2007

Status: Non-Operational

Current Mode: /u

TLM Downlink: 437.325 MHz 1200 bps FSK AX.25
CW Beacon: 437.325 MHz CW

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnumy
[09062010]
��LIBERTAD-1
Catalog Number: 31128
Launch Date: April 17, 2007

Status: Non-Operational

Current Mode: V/u APRS Packet ax25

Callsign: 5K3L

Uplink: 145.825 MHz 1200 AFSK ax25 APRS
Downlink: 437.399 MHz 1200 AFSK ax25 APRS

Telemetry Beacon: 437.4050 MHz 1200 AFSK ax25

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnumv
[09062010]
��PO-63 PEHUENSAT-1
Catalog Number: 29712
Launch Date: January 10, 2007

Status: Non-Operational

Current Mode: V/v

Uplink/Downlink: 145.825 Mhz FM
Voice Recorder: 145.825 Mhz FM

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnumQ
[09062010]
��NCUBE-2
Catalog number: 28897
Launch Date: October 27, 2005

Status: Still attached to XO-53 (SSETI)?

Proposed Callsign: TBA
Proposed Transmit Frequency: 437.305
2407.250

Official Website: http://www.ncube.no

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum$
[09062010]
��XO-53 SSETI
Catalog number: 28894

Launch Date: October 27, 2005

Status: Non-operational

Voice Uplink: 437.250 MHz FM 67Hz CTCSS
Voice Downlink: 2401.835 MHz FM
Packet Up/Downlink: 437.250 MHz 9k6 packet
Packet Downlink 2401.835 MHz 38k4 packet

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnumT
[09062010]
��UWE-1
Catalog Number: 28892
Launch Date: October 27, 2005

Status: Non-Operational

Mode U Telemetry
Downlink: 437.5050 MHz 9600 AFSK

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnumS
[09062010]
��AO-51 ECHO
Catalog number: 28375
Launch date: June 29, 2004 0745z
Launch site: Baikonur, Kazakhstan

Status: Non - Operational

Current Mode(s):
Voice repeater: V/u
Uplink: 145.880 MHz FM
Downlink: 435.150 MHz FM

Telemetry: Recovery efforts
Downlink: 435.150MHz 9k6

Analog voice downlink: 435.300 MHz FM
435.150 MHz FM
2401.200 Mhz FM
Analog voice uplink: 145.860 MHZ FM
145.880 MHz USB
145.880 MHz FM
145.920 MHz FM
145.920 MHz FM - 67 Hz PL tone burst
1268.705 MHz FM
Digital Downlinks: 435.150 MHz FM 38k4 PBP, 1 watt output
435.150 MHz FM 9k6 Pacsat Broadcast Protocol
2401.200 MHz FM 38k4 bps, AX.25
Digital Uplink: 145.860 MHz FM 9k6 Pacsat Broadcast Protocol
1268.703 mhz FM 9k6 Pacsat Broadcast Protocol

Beacon: 435.150 MHz

Mode and Antenna Polarization:
T: Linear
V: Linear
U: TX A (usually digital)LHCP
TX B (usually analog) RHCP
L: Linear
S: Linear

Broadcast: PECHO-11
BBS: PECHO-12

Official Webpage: http://www.amsat.org/amsat-new/echo/CTNews.php

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum
[12062011]
��CANX-1
Catalog Number: 27847
Launch Date: June 30, 2003

Status: Non-Operational

Downlink: 437.8800 MHz AFSK 1k2bps
[06052009]
��DTUSAT
Catalog Number: 27842
Launch Date: June 30, 2003

Status: Non-Operational

Current Mode: 2k4 AFSK Packet last reported

Downlink: 437.475MHz

Officail webpage: http://dtusat1.dtusat.dtu.dk/

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID1&retURL
�tellites/all_oscars.php
[02212009]
��AO-49 AATiS OSCAR-49 (SAFIR-M)
Catalog number: 27605
Launch Date: December 20, 2002

Status: Non-operational.

Uplink: 435.275 MHz 1200-baud AFSK
Downlink: 145.825 MHz 9600-baud FSK
(optional voice message)

Broadcast callsign: DP0AIS

Official webpage: http://amend.gmxhome.de
[01222007]
��MO-46 TIUNGSAT-1
Catalog number: 26548
Launch date: September 26, 2000

Status: Telemetry only

Uplinks: 145.850 MHz
145.925 MHz 9600-baud FSK
Downlink: 437.325 MHz

Broadcast callsign: MYSAT3-11
BBS: MYSAT3-12

TiungSat-1 is Malaysia's first micro-satellite and in addition to
commercial land and weather imaging payloads offers FM and FSK
Amateur Radio communication.

TiungSat-1, named after the mynah bird of Malaysia, was developed as
a collaborative effort between the Malaysian government and Surrey
Satellite Technology Ltd.
[03302009]
��NO-45 SAPPHIRE
Catalog number: 26932
Launch Date: September 30, 2001

Status: Non-Operational

Downlink: 437.095 MHz 1200 baud AX-25 AFSK
Uplink: 145.945 MHz UI Digipeater
Digi Callsign: KE6QMD

Everyone is welcome to use the digipeating/APRS features of Sapphire,
as per the user service agreement located at the following URL:
http://web.usna.navy.mil/~bruninga/pcsat/contract.txt
[03132005]
��SO-42 SAUDISAT-1B
Catalog number: 26549
Launch date: September 26, 2000

Status: Non-Operational

Downlink: 437.075 MHz

Broadcast Callsign: SASAT2-11
BBS: SASAT2-12

Further information is available at:
http://www.amsat.org/amsat/sats/n7hpr/so42.html
[01222007]
��SO-41 SAUDISAT-1A
Catalog number: 26545
Launch Date: September 26, 2000

Status: Non-Operational

Uplink: 145.850 MHz
Downlink: 436.775 MHz

Broadcast Callsign: SASAT1-11
BBS: SASAT1-12

Further information is available at:
http://www.amsat.org/amsat/sats/n7hpr/so41.html
[01222007]
��AO-40 AMSAT OSCAR 40
Catalog number: 26609
Launch Date: November 16, 2000

Status: Non-Operational

Uplinks

V-band: 145.840 - 145.990 MHz CW/LSB
U-band: 435.550 - 435.800 MHz CW/LSB
L1-band: 1269.250 - 1269.500 MHz CW/LSB
L2-band: 1268.325 - 1268.575 MHz CW/LSB

Downlinks

S2-band: 2401.225 - 2401.475 MHz CW/USB
K-band: 24048.010 - 24048.060 MHz CW/USB
Beacon: 2401.323 MHz
24048.035 MHz

P3-D Telemetry Beacons (IHU)

BEACON General Beacon(GB) Middle Beacon(MB) Engineering Beacon(EB)
2 m none 145.898 MHz none
70cm 435.438 MHz 435.588 MHz 435.838 MHz
13cm(1) 2400.188 MHz 2400.338 MHz 2400.588 MHz
13cm(2) 2401.173 MHz 2401.323 MHz 2401.573 MHz
3cm 10450.975 MHz 10451.125 MHz 10451.375 MHz
1.5cm 24047.885 MHz 24048.035 MHz 24048.285 MHz
[07162007]
��OO-38 OPAL
Catalog Number: 26063
Launch Date: January 27, 2000

Status: Non-Operational

Mode U TLM Beacon
Downlink: 437.1000 MHz 9600 FSK
[08132007]
��UO-36 UoSAT-12
Catalog number: 25693
Launch date: April 21, 1999

Status: Unknown

Uplink: 145.960 MHz (9600-baud FSK)
Downlinks: 437.025 MHz
437.400 MHz

Broadcast Callsign: UO121-11
BBS: UO121-12

The VK5HI viewer shareware for UO-36 is available on the AMSAT-NA web
site at the following URL:
ftp://ftp.amsat.org/amsat/software/win32/display/ccddsp97-119.zip
[01222007]
��SO-35 SUNSAT
Catalog Number: 25636
Launch date:February 23, 1999

Status: Non-Operational

Downlink: Mode B Repeater: 436.291 MHz
Mode J Digipeater: 436.250 MHz

Uplinks: Mode B Repeater: 145.825 MHz
Mode J Digipeater: 145.825 MHz
145.900 MHz

For more information of SUNSAT vist the satellite web site:
http://esl.ee.sun.ac.za/projects/sunsat/
[01222007]
��PO-34 PANSAT
Catalog number: 25520
Launch date: October 30, 1998

Status: Telemetry downloads only

Uplink/downlink: 436.500 MHz

Official Webpage: http://www.sp.nps.navy.mil/pansat/
[05092004]
��SO-33 SEDSAT-1
Catalog number: 25509
Launch date: October 24, 1998

Status: Semi-operational

Downlink: 437.910 MHz FM (9600-baud FSK)

The satellite is not currently available for uplink transmissions and
the image and transponder recovery efforts have been unsuccessful.

For more information on SedSat-1 visit the satellite web site:
http://seds.uah.edu/projects/sedsat/sedsat.htm
[09042006]
��GO-32 Gurwin TechSat-1B
Catalog number: 25397

Launch Date: July 10, 1998

Status: Non-Operational

Current Modes:
Telemetry : /u

Downlink: 435.225 MHz FM (9600-baud FSK)
435.325 Mhz - Not Available - temperature problems
Uplinks: 145.850 FM
145.890 FM
145.930 FM
1269.700 FM
1269.800 FM
1269.900 FM

Broadcast Callsign: 4XTECH-11
BBS Callsign: 4XTECH-12

More information of GO-32 can be found at:
http://asri.technion.ac.il/techsat/

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID&retURL
�atellites/status.php
[07172010]
��TO-31 TMSAT-1
Catalog number: 25396
Launch Date: July 10, 1998

Status: Non-operational

Uplink: 145.925 MHz 9600 baud FSK
Downlink: 436.925 MHz 9600 baud FSK

Broadcast callsign: TMSAT1-11
BBS: TMSAT1-12
[05012006]
��MO-30 UNAMSAT-2
Catalog Number: 24305
Launch Date: September 5, 1996

Status: Non-operational

Downlink: 435.1380 MHz AFSK 1200 BPS
Downlink: 435.2060 MHz AFSK 1200 BPS
Uplink: 145.8150 MHz AFSK 1200 BPS
Uplink: 145.8350 MHz AFSK 1200 BPS
Uplink: 145.8550 MHz AFSK 1200 BPS
Uplink: 145.8750 MHz AFSK 1200 BPS
[06042009]
��PO-28 POSAT-1
Catalog number: 22829

Launch Date: September 25, 1993

Status: Non-operational

Downlink: 429.950
Uplink: Not until handover back to Amatuer usage

Broadcast callsign: POSAT1-11
BBS callsign: POSAT1-12

AMSAT Webpage: http://www.amsat.org/amsat/sats/n7hpr/po28.html
POSAT-1 webpage:
http://www.ee.surrey.ac.uk/SSC/CSER/UOSAT/missions/posat1.html
[01012009]
��IO-26 ITAMSAT
Catalog number: 22826
Launch Date: September 26, 1993

Status: PSK carrier only

Current Mode:

Uplinks: 145.875 MHz FM 1200-baud
145.900 MHz FM 1200-baud
145.925 MHz FM 1200-baud
145.950 MHz FM 1200-baud

Downlink: 435.808 MHz PSK

Broadcast Callsign: ITMSAT-11
BBS: ITMSAT-12

Official webpage: http://www.itamsat.org
AMSAT Webpage: http://www.amsat.org/amsat/sats/n7hpr/io26.html
[01212007]
��KO-25 KITSAT
Catalog number: 22828
Launch date: September 26, 1993

Status: Non-operational

Uplink: 145.980 MHz FM 9600-baud FSK
Downlink: 436.500 MHz FM

Broadcast Callsign: HL02-11
BBS: HL02-12
[05092004]
��AO-24 ARSENE
Catalog Number: 22654
Launch Date: May 13, 1993

Status: Non-operational

Uplink: 435.0625 MHz FM 1k2bps AFSK
435.1125 MHz FM 1k2bps AFSK
435.1375 MHz FM 1k2bps AFSK
Downlink: 145.9750 MHz FM 1k2bps AFSK
2446.5025 MHz FM 1k2bps AFSK

Beacon: 2446.4700 MHz CW

Broadcast callsign:
BBS:
[12162009]
��KO-23 KITSAT
Catalog number: 22077
Launch date: August 10, 1992

Status: Non-operational

Uplink: 145.900 MHz FM (9600-baud FSK)
Downlink: 435.170 MHz FM

Broadcast Callsign: HLO1-11
BBS: HLO1-12
[01222007]
��UO-22 UOSAT
Catalog number: 21575
Launch date: July 17, 1991

Status: Non-Operational

Uplink: 145.900 FM 9600-baud FSK
Downlink: 435.120 MHz FM

Broadcast Callsign: UOSAT5-11
BBS: UOSAT5-12
[01222007]
��AO-21 AMSAT-OSCAR 21
Catalog Number: 21087
Launch Date: January 29, 1991

Status: Non-Operational

Uplink: 435.041 MHz FM DSP
Downlink: 145.983 MHz FM DSP
[01222007]
��FO-20 JAS-1b
Catalog number: 20480
Launch Date: February 07, 1990

Status: Non-Operational

Beacons: 435.795 MHz CW
435.910 MHz AX25

Voice Transponder:
Uplink: 145.900 to 146.000 MHz CW/LSB

Downlink: 435.800 to 435.900 MHz CW/USB

Digital Transponder:
Uplinks: 145.850 MHz
145.870 MHz
145.890 MHz
145.910 MHz
Downlink: 435.910 MHz

More FO-20 info can be found at:
http://www.amsat.org/amsat/sats/n7hpr/fo20.html
[01152007]
��WO-18 WEBERSAT
Catalog Number: 20441
Launch Date: January 22, 1990

Status: Non-Operational

Downlink: 437.104 MHz SSB 1200 Baud PSK AX.25
[05012006]
��DO-17 Dove
Catalog Number: 20440
Launch Date: January 22, 1990

Status: Non-operational.

Downlink: 145.825 MHz FM 1200 Baud AFSK
Beacon: 2401.220 MHz
[05012006]
��AO-16 PACSAT
Catalog number: 20439
Launch Date: January 22, 1990

Status: non-operational

Current Mode: V/u

Uplink: 145.900 MHz FM 1200-baud Manchester FSK (reserved)
145.920 MHz FM VOICE
145.940 MHz FM 1200-baud Manchester FSK (reserved)
145.960 MHz FM 1200-baud Manchester FSK (reserved)

Downlink: 437.026 MHz USB VOICE
(1200-baud PSK - MBL Telemetry Only)

Mode-S Beacon: 2401.1428 MHz [NO FUTURE OPERATIONS PLANNED]

Mode and Antenna Polarization:
U: RC 437.050 MHz RHCP
PSK 437.026 MHz LHCP
V: Linear

Broadcast Callsign: PACSAT-11
BBS: PACSAT-12

AO-16 AMSAT Webpage: http://www.amsat.org/amsat/sats/n7hpr/ao16.html
[07242009]
��UO-15 UoSAT-4
Catalog Number: 20438
Launch Date: January 22, 1990

Status: Non-operational

Uplink: ?
Downlink: 435.1250MHz (?)
435.1200MHz (?)
[06042009]
��UO-14 UoSAT-3
Catalog number: 20437
Launch date: January 22, 1990

Status: Non-operational

Uplink: 145.975 MHz FM
Downlink: 435.070 MHz FM
[05092004]
��FO-12 Fuji-OSCAR 12
Catalog Number: 16909
Launch Date: August 12, 1986

Status: Non-Operational

Mode V/U (J) Linear Transponder (Inverting):
Uplink: 145.9000 - 146.0000 MHz SSB/CW
Downlink 435.8000 - 435.9000 MHz SSB/CW

Mode V/U (J) Packet:
Uplink: 145.8500 MHz MFSK 1200 BPS
Uplink: 145.8700 MHz MFSK 1200 BPS
Uplink: 145.8900 MHz MFSK 1200 BPS
Uplink: 145.9100 MHz MFSK 1200 BPS

Downlink 435.9100 MHz PSK 1200 BPS

Telemetry Beacon: 435.7950 MHz SSB/CW
[01152007]
��AO-10 OSCAR 10
Catalog number: 14129
Launch Date: June 16, 1983

Status: Non-operational

Uplink: 435.030 to 435.180 MHz CW/LSB
Downlink: 145.975 to 145.825 MHz CW/USB

Beacon: 145.810 MHz (unmodulated carrier)

W4SM has more information about the satellite at the following URL:
http://www.cstone.net/~w4sm/AO-10.html
[05092004]

��AO-8 AMSAT-OSCAR 8
Catalog Number: 10703
Launch Date: March 3, 1978

Status: Non-Operational

Mode V/U (J) Linear Transponder (Non-Inverting): Non-Operational
Uplink: 145.9000 - 146.0000 MHz SSB/CW
Downlink 435.1990 - 435.2000 MHz SSB/CW

Mode V/U (J) TLM Beacon: Non-Operational
Downlink 435.0950 MHz CW

Mode V/A (A) Linear Transponder (Non-Inverting): Non-Operational
Uplink: 145.8500 - 145.9000 MHz SSB/CW
Downlink 29.4000 - 29.5000 MHz SSB/CW

Mode V/A (A) TLM Beacon: Non-Operational
Downlink 29.4020 MHz CW
[01152007]
��AO-6 AMSAT-OSCAR 6
Catalog Number: 06236
Launch Date: October 15, 1972

Status: Non-Operational

Uplink: 145.9000 - 146.0000 MHz SSB/CW
Downlink: 29.4500 - 29.5500 MHz SSB/CW
Beacons: 29.450 MHz
435.100 MHz
[01312008]
��AO-5 Australis-OSCAR 5
Catalog Number: 04321
Launch Date: January 23, 1970

Status: Non-Operational

Telemetry Beacons: 144.0500 MHz CW
29.4500 MHz CW
[01152007]
��OSCAR III
Catalog Number: 01293
Launch Date: March 09, 1965

Status: Non-Operational

Uplink: 145.9750 - 146.0250 MHz SSB/CW
Downlink: 144.3250 - 144.3750 MHz SSB/CW
[01012007]
��RS-15 RADIO SPORT RS-15
Catalog number: 23439
Launch Date: December 26, 1994

Status: Non-operational

Uplink: 145.858 to 145.898 MHz CW/USB
Downlink: 29.354 to 29.394 MHz CW/USB

Beacon 1: 29.352 MHz (intermittent)
Beacon 2: 29.398 MHz

SSB meeting frequency: 29.380 MHz (unofficial)
[06202004]
��RS-13 RADIO SPORT RS-13
Catalog number: 21089
Launch date: February 5, 1991

Status: Non-operational

Uplink: 21.260 to 21.300 MHz CW/USB
Downlink: 145.860 to 145.900 MHz CW/USB

Beacon: 145.860 MHz

Robot: 145.908 MHz
[05232004]
��RS-12 RADIO SPORT RS-12
Catalog number: 21089
Launch date: February 5, 1991

Status: Non-operational

Uplink: 21.210 to 21.250 MHz CW/USB
Downlink: 29.410 to 29.450 MHz CW/USB

Beacon: 29.408 MHz

Robot: 29.454 MHz
[05232004]
NNNN
/EX

ANS is released worldwide via the AMSAT ANS e-mail reflector and a live radiocast on the AMSAT-NA 20-meter net held each Sunday on 14.282 MHz. Pre-net operations start at 18:00 UTC, with current ANS bulletins transmitted to the eastern U.S. at 19:00 UTC and to the western U.S. at 19:30 UTC.

Information on AMSAT-NA is available at the following URL:
http://www.amsat.org

Mailing address:
AMSAT-NA
850 Sligo Avenue, Suite 600
Silver Spring, Maryland 20910-4703

Voice: 301-589-6062
888-322-6728
FAX: 301-608-3410

Currently, AMSAT-NA supports the following (free) mailing lists:

* AMSAT News Service (ANS)
* General satellite discussion (AMSAT-BB)
* Orbit data (KEPS)
* Manned space missions (SAREX)
* District of Columbia area (AMSAT-DC)
* New England area (AMSAT-NE)
* AMSAT Educational Liaison mailing list (AMSAT-EDU)
* AMSAT K-12 Educational Liaison mailing list (AMSAT-K12)

A daily digest version is available for each list.

To subscribe, or for more list information, visit the following URL:
http://www.amsat.org/mailman/listinfo/ans

In addition to regular membership, AMSAT-NA offers membership in the President's Club. Members of the President's Club, as sustaining donors to AMSAT Project Funds, will be eligible to receive additional benefits. Application forms are available from the AMSAT-NA Office.

This week's Weekly Satellite Report Editor is James French, W8ISS.

ANS is always dedicated to past ANS editor 'BJ' Arts, WT0N, and to the memory of longtime AMSAT supporters Werner Haas, DJ5KQ, Dennis Kitchen, G0FCL and John Branegan GM4IHJ.

Please send any amateur satellite news or reports to: ans-editor{at} amsat.org
NNNN
/EX

72. Radio Meteor Obs. Bull. April 2012 Lyrids

Newsgroup: rec.radio.amateur.space
Date: 2012-05-05 17:03:06 UTC
From: Chris Steyaert <observations@rmob.org>
Message-ID: <49naq7ht9nj1b57a3lqoi36af8t65i2amt@4ax.com>
Source record: 122
Cross-posted to: rec.radio.amateur.space,sci.astro.amateur

Radio Meteor Observation Bulletin No. 225 of April 2012 (89 K) is available now as

http://www.rmob.org/rmobtext/rmob1204.txt

More information and the visual presentation of the hourly forward scatter counts can be found on

http://www.rmob.org

Chris

73. ANS-127 AMSAT News Service Weekly Bulletins

Newsgroup: rec.radio.amateur.space
Date: 2012-05-06 01:28:42 UTC
From: JoAnne Maenpaa <k9jkm@comcast.net>
Message-ID: <001901cd2b27$8ec5a990$ac50fcb0$@net>
Source record: 123
Cross-posted to: rec.radio.amateur.space,rec.radio.info

AMSAT NEWS SERVICE
ANS-127

ANS is a free, weekly, news and information service of AMSAT North America, The Radio Amateur Satellite Corporation. ANS reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in designing, building, launching and communicating through analog and digital Amateur Radio satellites.

Please send any amateur satellite news or reports to:
ans-editor at amsat.org

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* Volunteers are needed to help at the AMSAT booth at Dayton. Gould *
* WA4SXM, is looking for volunteers to help man the AMSAT booth dur- *
* ing the 2012 Hamvention. People are needed all 3 days for 2 hour *
* shifts. Please send the days and times you are available to help *
* as well as how many shifts you are willing to work via e-mail to *
* wa4sxm at amsat.org. *
* Monitor http://www.amsat.org/amsat-new/hamvention/2012/Dayton.php *
* for the latest AMSAT at Dayton news and developments *
****

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* Ecuador NEE-01 Pegasus Cubesat Plans Classroom Access to Satellite
* Satellite Shorts From All Over

SB SAT @ AMSAT $ANS-127.01
ANS-127 AMSAT News Service Weekly Bulletins

AMSAT News Service Bulletin 127.01
>From AMSAT HQ SILVER SPRING, MD.
May 6, 2012
To All RADIO AMATEURS
BID: $ANS-127.01

2012 AMSAT Forum at Dayton - Saturday May 19

The AMSAT Forum at the 2012 Dayton Hamvention will be on Saturday morning May 19 from 11:15 to 13:30 in Forum Room 5. The moderator will be Alan Biddle, WA4SCA

The speakers will be:

Barry Baines, WD4ASW; AMSAT Status Report

Barry, AMSAT President, will highlight recent activities within AMSAT, and discuss some of the challenges and accomplishments of the organization.

Mark Hammond, N8MH; AMSAT Educational Relationships

Mark, AMSAT VP of Educational Relationships, will discuss his education activities.

Gould Smith, WA4SXM; ARISSat-1 Operation in Space

Gould, AMSAT Project Manager for ARISSat-1, will talk about its operation aboard the ISS, the deployment and operations this past fall and winter.

Tony Monteiro, AA2TX; Project Fox - AMSAT's First CubeSat

Tony, AMSAT Engineering VP, will discuss the design and status of Project-FOX.

Howard Long, G6LVB; "FUN in Space for All!"

Howard, AMSAT-UK Committee, will discuss the FUNcube project which will enable amateurs and students to have FUN in space. For amateurs, the spacecraft will carry conventional UHF to VHF linear transponders. For students of all ages, the same space-craft will provide strong telemetry transmissions which they can easily receive at schools in support of science, technology, engineering, and math subjects (STEM).

[ANS thanks Gould Smith, WA4SXM and Alan Biddle, WA4SCA for the above information]

Fox-1 Satellite Project Team Completes Preliminary Design Review

The Fox Project completed its Preliminary Design Review (PDR) over three nights, 24-26 April 2012. Mechanical, RF, control, power, and related issues were reviewed. The current status was evaluated, and the needed development for various systems was refined. AMSAT Engin-eering Vice President Tony Monteiro, AA2TX, characterized the review as very productive.

Help Wanted Fox-1 Satellite

AMSAT is in need of an experienced RF designer for our Fox-1 satel-

lite. Due to ITAR restrictions, you must be a US citizen or permanent resident. If interested please send an email with your phone number to Tony Monteiro - AA2TX@amsat.org

Fox-1 Targets Launch in 2013

Project ELaNa, NASA's "Educational Launch of NanoSat" managed by the Launch Services Program at the Kennedy Space Center, announced on February 10 that the AMSAT Fox-1 cubesat has been selected to join the program. AMSAT is working with NASA in a collaborative agreement where NASA will cover the integration and launch costs. Fox-1 was selected to join the NASA ELaNa program on merit in support of NASA strategic and educational goals.

AMSAT's Fox-1 project timeline is based on targeting a launch in the second half of 2013. NASA will determine on which flight each of the Project ELaNa CubeSats are launched.

Highlights of the Fox-1 design include:

+ Fox-1 is designed as the immediate replacement for AO-51. Its U/V FM transponder with a VHF downlink will be easier to hear with small antennas.

+ The same radio equipment used for AO-51 (HT + handheld beam) can be used for Fox-1.

+ Fox-1 sends telemetry in a sub-audible band on the downlink allowing simultaneous voice contacts with telemetry decode. AMSAT will provide free sound-card PC software.

+ Includes science experiment using MEMS gyros being developed by Penn State students.

Find more details of AMSAT Fox-1 Project on-line at:
http://www.amsat.org/amsat-new/fox/

Donate to the Fox-1 Project Fund on-line at http://www.amsat.org; scroll down halfway to the PayPal donation widget - or at the AMSAT Store http://www.amsat-na.com/store/categories.php

NASA's Cubesat Launch Initiative web page can be found at:
http://www.nasa.gov/directorates/heo/home/CubeSats_initiative.html

[ANS thanks AMSAT Engineering Vice-President Tony Monteiro, AA2TX and Alan Biddle, WA4SCA for the above information]

AMSAT Awards

AMSAT Director Contests and Awards, Bruce Paige, KK5DO says congratulations are in order for our latest AMSAT Awards recipients.

The following have entered into the Satellite Communicators Club for making their first satellite QSO.
+ Brent Ocken, KJ6MRG
+ Elizabeth Royer, KB3WSW

The following have earned the AMSAT Communications Achievement Award.
Hector Luis Martinez Sis, CO6CBF, #547
+ Marcelo Teruel, IK0USO #549

The following have earned the South Africa Satellite Communications Achievement Award.
+ Hector Luis Martinez Sis, CO6CBF, #US178

The following have earned their Robert W. Barbee, Jr. W4AMI Award
+ Tom Deeble, KA6SIP #77
+ Clayton Coleman, W5PFG #78

To see all the awards visit http://www.amsat.org.

[ANS thanks Bruce Paige, KK5DO for the above information]

Satellite Operations Planned for Worldwide Museum Ships Weekend

Museum Ships Weekend Coming Up June 2-3, 2012
by Allen F. Mattis, N5AFV, n5afv@amsat.org

The worldwide Museum Ships Weekend Event (MSWE) will be held for two days, June 2-3, 2012. Last year 83 ships in 13 countries around the world participated in the event. Amateur radio operators make special event contacts from these museum ships on all amateur radio bands with most of the contacts taking place on the HF bands. In the past several years only two or three museum ships in North America have made satellite contacts during the event.

This year a number of Houston area AMSAT members, W5ACM, N5AFV and WC5WM, will participate with the Brazos Valley Amateur Radio Club (BVARC) operating club station KK5W from Seawolf Park on Pelican Island in Galveston, Texas. Seawolf Park is home to two Second World War vintage museum ships - the destroyer escort USS Stewart (DE-238) and the submarine USS Cavalla (SS-244). As a result, a contact with KK5W counts for two ships. Amateur radio operators who make contacts with 15 or more ships qualify for a handsome certificate.

The BVARC KK5W station plans to operate the afternoon passes of AO-27 and FO-29 on Saturday June 2nd and hope other AMSAT members will be operating from other ships. This will be their fifth year participating in the MSWE and hope to make their first MSWE satellite contact with another museum ship this year.

If any AMSAT members are interested in this event they may visit the MSWE website: http://www.nj2bb.org/museum/index.html to find out if any museum ships near them are participating.

[ANS thanks Allen Mattis, N5AFV for the above information]

Changes to the IARU Satellite Advisor Region 1

The International Amateur Radio Union (IARU) Satellite Advisor's Advisory Panel assists builders and prospective builders of satellites that will operate on frequencies allocated by the ITU to the Amateur Service. This panel provides frequency coordination, a comprehensive set of standards guidelines, and international forums.

The IARU Satellite Adviser is Hans van de Groenendaal, ZS6AKV. This week AMSAT-DL President Peter G�lzow, DB2OS recommended to the IARU Satellite Adviser that Mike Rupprecht takes over membership of the advisory panel from Norbert Nothoff. Hans agreed to appoint Mike, DK3WN as a panel member. He thanked Norbert, DF5DP for his support as a member of the Advisory panel for many years and is looking forward to working with Mike.

Mike Rupprecht, DK3WN will help with the IARU Satellite Frequency Coordination process in Region 1 and in particular in Germany. Mike is very active and well known on the satellite bands and Internet boards, and he has particularly profound knowledge of all cubesat operations. He is also very well known in the community of cubesat operators, including excellent communication connections with those groups.

Mike Rupprecht, DK3WN will support Norbert Nothoff, DF5DP and take over the coordination process of satellite projects from him, which includes correspondence with the coordination group and the satellite operators.

Norbert Nothoff, DF5DP will continue to stay in charge of anything which is related to government issues (government and office liaison, laws, bylaws, and regulations of satellite operations) in Germany.

The following serve on the IARU Satellite Advisor's Advisory Panel:

IARU Satellite Advisor
Hans van de Groenendaal, ZS6AKV

Region 1
Graham Shirville, G3VZV
Mike Rupprecht, DK3WN

Region 2
Lee McLamb, KU4OS
Art Feller, W4ART

Region 3
Shizuo Endo, JE1MUI

Special Advisors
Ray Soifer, W2RS

Jan King, VK4GEY/W3GEY

The IARU Satellite page can be found at:
http://www.iaru.org/satellite/

The status of all satellites requesting coordination and those which have already received coordination can be found at:
http://www.amsat.org.uk/iaru/

[ANS thanks AMSAT-DL President Peter G&#65533;lzow, DB2OS for the above information]

New Frequencies for AMSAT-UK FUNcube-1

This DNEPR-1 launch in October 2012 could carry around 10 amateur radio satellites including FUNcube-1 into space. As a result the International Amateur Radio Union (IARU) satellite advisory panel have had to carefully coordinate the planned operating frequencies in order to minimize the risk of interference between FUNcube-1 and other payloads on the same launch.

The IARU Amateur Satellite Frequency Coordination Panel have now confirmed the following frequencies for FUNcube-1 (these frequencies replace those previously announced)

FUNcube-1 New Frequencies

Inverting linear transponder
Uplink 435.150 &#65533; 435.130 MHz (replacing 435.080 - 435.060 MHz)
Downlink 145.950 &#65533; 145.970 MHz (replacing 145.960 - 145.980 MHz)

Telemetry: 145.935 MHz BPSK (replacing 145.955 MHz)

UKube-1

Uplink 435.060 - 435.040 MHz
Downlink 145.940 - 145.960 MHz

Telemetry 145.840 MHz
FUNcube sub system beacon 145.925 MHz
S Band downlink 2401.500 MHz
myPocketQub 437.425 - 437.525 MHz

Delfi-n3Xt

Inverting linear transponder:
Uplink 435.530 - 435.570 MHz
Downlink 145.880 - 145.920 MHz

Telemetry 145.870 MHz and 145.930 MHz
High Speed 2405.00 MHz

Also on this launch two additional satellites Triton-1 and Triton-2
will include two similar secondary amateur radio payloads, being two
single channel mode U/V (435-145MHz) FM to DSB transponders. After
their three month science mission is complete plans are to have the
satellite continue in the Amateur Satellite Service for as long as
possible.

Triton-1

Main Downlink 145.815 MHz (FM to DSB transponders similar to AO-16)
Backup Downlink 145.860 MHz
The UHF uplink frequencies will be announced by the project team
once the satellite becomes available for amateur operations.

Triton-2

Main Downlink 145.860 MHz FM to DSB transponder
Backup Downlink 145.815 MHz
S-band downlink 2408.00 MHz FM to FM transponder
The UHF uplink frequencies will be announced by the project team
once the satellite becomes available for amateur operations.

The IARU Satellite Coordination data for all of the satellites can
be found at: http://www.amsat.org.uk/iaru/

Gunter's Space Page (September 2012) lists the proposed manifest
for the DNEPR-1 launch: http://space.skyrocket.de/doc_chr/lau2012.htm

[ANS thanks AMSAT-UK and the IARU Satellite Advisory Panel for the
above information]

Delfi-C3 (DO-64) Celebrates 4 Years On-Orbit

The Technical University of Delft in the Netherlands celebrated the
fourth anniversary on-orbit of their student-developed, and -built
Delfi-C3 3U Cubesat. Launched on April 28, 2008 aboard PSLV-C9 it
was also designated DO-64 by AMSAT.

Delfi-C3 the first nano-satellite project from the Delfi program of
TU Delft. The program gives students the opportunity to gain practi-
cal experience, but the university would also develop with new tech-
nology. A small satellite is a relatively inexpensive test platform
for new technology of Dutch aerospace companies including thin-film
solar cells of Dutch Space solar and autonomous wireless sensors.

This satellite also invited amateur radio participation to receive
its telemetry downlink using ordinary equipment used by amateur sat-
ellite operators. The Delfi-C3 team provides the RASCAL software to
decode and forward the data to TU Delft. The software can be down-
loaded at: http://tinyurl.com/DelfiC3-RASCAL (www.delfispace.nl).
The satellite continues to transmit telemetry for stations who wish
to experiment using the BPSK decoder:

+ Primary telemetry downlink: 145.870 MHz 1200 Baud BPSK AX.25 400mW
+ Backup telemetry downlink: 145.930 MHz 1200 Baud BPSK AX.25 400mW
+ The 435 MHz up/145 MHz down linear transponder is out of service.

Delfi-C3 pioneer Jeroen Rotteveel said "It is great to see that our satellite is still performing, especially when you consider that it is an experimental satellite built by students. From this one small satellite project a complete nanosatellite program has been set up. A spin-off company, ISIS, focusing on providing components for small satellites was created."

Future satellite development at TU Delft includes:

Delfi-n3Xt

Delfi-n3Xt will fly an active attitude control system controlling the satellite's orientation of Delfi-n3Xt with a system of sensors so that the solar panels maintain optimum sun pointing. It will test a new type of engine for small satellites.

Delfi-n3Xt, equipped with a linear transponder will be launched in September, 2012 aboard a Russian Dnepr rocket along with dozens of other small satellites which include UKube 1, FUNcube 1, which all will carry an amateur radio linear transponder. Triton 1, and Triton 2 satellites on this launch will feature FM-to-DSB and FM-to-FM transponders.

QB50

After Delfi-n3Xt, TU Delft will work on two nano satellites to fly as part of the 50 Cubesat constellation in the QB50 project. QB50 is a European collaborative mission with fifty scattered satellites in orbit around the Earth performing measurements on the upper layer of the atmosphere.

OLFAR

This project will develop a radio-telescope based on a swarm of nano satellites in orbit around the moon measuring signals from deep space. OLFAR (Orbiting Low Frequency Antenna for Radioastronomy) is an important milestone from which Delfi-C3 was the first step.

Find more information about the TU Delft satellites at:
http://www.delfispace.nl
http://www.isispace.nl

[ANS thanks TU Delft, the Delfi-C3 Team, and AMSAT-UK for the above information]

Ecuador NEE-01 Pegasus Cubesat Plans Classroom Access to Satellite

Ecuador's first satellite NEE-01 Pegasus is slated to launch in October 2012 on the same DNEPR rocket as the AMSAT-UK FUNcube-1, UKube-1,

Delfi-n3Xt, Triton-1, and Triton-2, along with several additional
cubesats.

One of the satellite's objectives is to serve as a space platform
for elementary education. The satellite will send two signals that
will be received and decoded by the EXA's HERMES-A ground station
in Guayaquil and then uploaded live to the Internet using Twitter
and Facebook.

The first signal will contain text book questions and the second
will contain an image related to the question. If the students are
able to answer the question correctly they will be granted access
to the video camera onboard the spacecraft and will be able to see
earth from space as the astronauts see it in their space missions.

More advanced students will have access to the pure radio signal so
they can try decoding it by themselves. The EXA will provide them
with the appropriate support software free of charge.

There is an onboard camera to send live video from space from a 3
watt TV transmitter in the 902 MHz band along with a beacon that
will send an ID and Ecuador's national anthem.

The cubesat will help monitoring near-earth objects from orbit using
its onboard 720p HD video camera and will also help in the catalog
and control of orbital debris (space junk), this new mission will
turn the NEE-01 in to the first online, real time orbital video sen-
try for the planet, as the satellite has the capability to stream
its video signal directly to the Internet.

Additional NEE-01 Pegasus Cubesat mission goals include:

+ Technological demonstration/Education
+ Test of real time video transmission
+ Test of Thermal/Radiation shield
+ Test of multiphase solar array
+ Test of passive antenna deployment
+ Test of carbon nanotubes thermal control system

AMSAT-UK posted news and photos of NEE-01 Pegasus at:
http://www.uk.amsat.org/6932

[ANS thanks AMSAT-UK for the above information]

Satellite Shorts From All Over

+ It is time to submit nominations for the upcoming open seats on
the AMSAT-NA Board of Directors. Three directors and two alternate
directors have terms expiring this year. The director seats open
for election are held by Tom Clark, K3IO; Lou McFadin, W5DID; and
Gould Smith, WA4SXM. The alternate director seats open for election
are held by Mark Hammond, N8MH and Patrick Stoddard, WD9EWK. The

AMSAT front page news at http://www.amsat.org has the instructions to submit your nominations.

+ The 2012 AMSAT Annual Meeting and Symposium will be held at the Holiday Inn, Orlando (Florida) Airport on October 26-28, 2012. The First Call for Papers has been issued. The Symposium Team requests a tentative title of your presentation as soon as possible, with final copy to be submitted by October 1 for inclusion in the printed proceedings. Abstracts and papers should be sent to Dan Schultz, N8FGV, at n8fgv@amsat.org. Watch for the latest 2012 Symposium information to be posted on the AMSAT web at: http://www.amsat.org/amsat-new/symposium/2012/index.php

+ The CQ Magazine News Room (http://www.cqnewsroom.blogspot.com/) has posted stories covering amateur satellite developments:
o Japan Plans 5 Amateur Satellite Launches
o Multi-Cubesat Launcher Built by Naval Postgraduate School
o ANS Co-Editor Dee Interdonato, NB2F, Silent Key
o Hams on 23 Centimeters Must Protect New FAA Radars

+ The ARISS contact with Flight Engineer Don Pettit and students at Flabob Airport in Jurupa Valley CA US that occurred on April 19 was featured on this week's episode of the Bob Heil & Gordon West "Ham Nation" video podcast. The ARISS project is the top story at about the 4-minute mark: http://twit.tv/show/ham-nation/46 Video filmed during the contact has also been posted on the Flabob site: http://www.iss-flabob.com (via Clint K6LCS)

+ OMG Space (http://visual.ly/omg-space?view=true) was made by Margot Trudell as graphic design thesis project at Toronto's OCAD University. The page displays the Sun, all the planets and all the distances separting them to scale. The quickest way to navigate our solar system is to click on the planet names on the bottom of the screen. You can also scroll up and down manually ... if only to see how long it takes you to not get anywhere - this is to scale, the distances are vast. (UniverseToday.com)

+ The next Hudson Valley Satcom net date is Thursday, May 10 at 8:00 PM EDT (UTC -4) on the 146.970 MHz repeater, and also on the N2EYH-L Echolink node. More info: http://www.hvsatcom.org/ (via Stu, WA2BSS)

+ Vince Waelti, K9TSU, Net Manager of the Satchat net on the AMSAT EchoLink server invites all radio amateurs to check-in when the net meets on the 1st and 3rd Saturday of the month 1900-2030 CDT (UTC-5). Vince says the new format of the net will be a roundtable format.

+ Congratulations to Al, W5LUA for working into state number 34 on 2304 MHz via a good tropo opening. Al worked North Carolina on April 28. That's really an amazing accomplishment. (via NP4Z on

the moon-net list)

+ Check out Markarian's Chain. There are well over 100 galaxies in this image: http://tinyurl.com/Markarian-Chain (UniverseToday.com)

[ANS thanks everyone for the above information]

/EX

In addition to regular membership, AMSAT offers membership in the President's Club. Members of the President's Club, as sustaining donors to AMSAT Project Funds, will be eligible to receive additional benefits. Application forms are available from the AMSAT Office.

Primary and secondary school students are eligible for membership at one-half the standard yearly rate. Post-secondary school students enrolled in at least half time status shall be eligible for the student rate for a maximum of 6 post-secondary years in this status. Contact Martha at the AMSAT Office for additional student membership information. And with that please keep in mind the implicit curve equation produces the heart shape: (x^2 + y^2 - 1)^3 - x^2 * y^3 The web computation engine at: http://tinyurl.com/Equation-Engine (wolframalpha.com) will plot it for you. You may need to click the 'compute' orange button to the right of the equation.

73,
This week's ANS Editor,
JoAnne Maenpaa, K9JKM

74. Weekly Highlights of Solar and Geomagnetic Activity, 30 April - 06 May 2012

Newsgroup: rec.radio.amateur.space
Date: 2012-05-07 15:30:05 UTC
From: SWPC.Webmaster@noaa.gov
Message-ID: <20120507153001.9A07A33C57@panix2.panix.com>
Source record: 124
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.dx,rec.radio.amateur.space,rec.radio.shortwave,rec.radio.info

```
:Product: Weekly Highlights and Forecasts
:Issued: 2012 May 07 1445 UTC
# Prepared by the US Dept. of Commerce, NOAA, Space Weather Prediction Center
# Product description and SWPC contact on the Web
# http://www.swpc.noaa.gov/weekly.html
#
# Weekly Highlights and Forecasts
#
Highlights of Solar and Geomagnetic Activity
30 April - 06 May 2012

Solar activity was moderate. The week was dominated by low level
C-class x-ray activity from Regions 1469 (S23, L=335, class/area
Eso/140 on 02 May) and 1471 (S21, L=276, class/area=Eho/320 on 02
May) until 05 May. Then, Region 1476 (N10, L=188, class/are=Fhi/760
on 06 May) rotated onto the visible disk and produced three
impulsive M-class flares in approximately 12 hours. The largest of
these was an M1/Sn at 05/1323Z. Only one M1/1n flare was observed
the following day, also from Region 1476, at 06/1747Z.

Several coronal mass ejections (CMEs) were observed during the
period, although only three were deemed to be potentially
earth-directed. The first of the three occurred on 04 May and was
observed in STEREO-Ahead COR2 coronagraph imagery around 0309Z. The
second was associated with a C1 flare from Region 1469 at 04/2356Z.
The third was associated with a long duration C2/Sf flare from
Region 1470 (S15, L=286, class/area=Cro/30 on 05 May) at 05/0639Z
and evidence of the eruption was observed in SDO AIA imagery at
05/0600 UTC. No significant radio emissions were observed with any
of the CMEs.

No proton events were observed at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit was at
high levels (&gt;1000 pfu) for the first three days (30 April-02
May). After a return to normal background levels on 03-04 May, flux
reached moderate levels on 05 and 06 May.

Geomagnetic field activity was at predominantly quiet levels all
week. Unsettled levels occurred late on 02 May into early 03 May
associated with a prolonged period of negative Bz and again late on
03 May in response to a solar sector boundary change. Solar wind
speed measured at the ACE spacecraft ranged from 300-400 km/s
throughout the week.
```

Forecast of Solar and Geomagnetic Activity
07 May - 02 June 2012

Solar activity is expected to be low to moderate as Region 1476 makes its way across the visible solar disk.

No proton events are expected at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit is expected to reach high levels on 11-14 May and again on 23-29 May in response to recurrent coronal hole high speed wind streams.

Geomagnetic field activity is expected to begin at unsettled levels for 07-08 May in response to a solar sector boundary crossing and CME arrival. The arrival of a recurrent coronal hole high speed stream will bring active levels on 09-11 May. After a brief return to quiet levels, unsettled conditions are expected in response to another coronal hole high speed stream on 14-15 May. Mostly quiet levels are then forecast until 19 May when unsettled to active conditions are expected to accompany the arrival of a coronal hole high speed stream. Active levels will persisit through 23 May followed by a return to quiet conditions through the end of the period.

75. ANS-128 AMSAT Weekly Satellite Report

Newsgroup: rec.radio.amateur.space
Date: 2012-05-08 13:53:31 UTC
From: JoAnne Maenpaa <k9jkm@comcast.net>
Message-ID: <000b01cd2d21$ebc3a290$c34ae7b0$@net>
Source record: 125
Cross-posted to: rec.radio.amateur.space,rec.radio.info

This report is organized into four (4) parts.
Part 1 (S1) - operational analog amateur satellites
Part 2 (S2) - operational digital amateur satellites
Part 3 (S3) - non - operational satellites
Part 4 (S4) - deborbited/returned satellites

SB SAT @ AMSAT W8ISS $WSR-128.S1
WSR 128 Part 1 05/07/2012

AMSAT NEWS SERVICE BULLETIN 128.S1
FROM AMSAT HQ SILVER SPRING, MD, May 07, 2012
TO ALL RADIO AMATEURS
BID: $WSR-128.S1

PW-Sat
Catalog Number:
Launch Date: Febrauary 13, 2012
Launch Site: Kourou, French Guiana

Status: On Orbit

Uplink: 435.020 MHz FM
Downlink: 145.900 MHz DSB

Beacon:

Callsign:

URL:

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum2
[03162012]
��DO-64 Delfi-C3
Catalog number: 32789
Launch Date: April 28, 2008 0354z
Launch site: Satish Dhawan Space Centre, India

Status: Operational
Current Mode: Science Mode - Beacon ONLY

Telemetry: 145.870 MHz

Downlink: 145.880 to 145.920 MHz
Uplink: 435.530 to 435.570 MHz

Delfi-C3 web page: http://www.delfic3.nl/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnumh
[02092011]
��VO-52 HAMSAT
Catalog number: 28650
Launch Date: May 05, 2005 0444z
Launch site: Satish Dhawan Space Centre, India

Status: Operational
Current Mode: U/v - Dutch Transponder

Frequencies:
Indian Transponder:
Uplink: 435.220 to 435.280 MHz LSB/CW
Downlink: 145.930 to 145.870 MHz USB/CW

Dutch Transponder:
Uplink: 435.225 to 435.275 MHz LSB/CW
Downlink: 145.925 to 145.875 MHz USB/CW

Indian Beacon: 145.9360 MHZ CW
Dutch Beacon: 145.860 MHz 12WPM with CW message

Mode and Antenna Polarization:
V: LHCP
U: RHCP

Official Webpage: http://www.amsatindia.org/hamsat.htm

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum0

To know what transponder is switched on please listen for the beacon
that is active. Each transponder has a different beacon.
[03232012]
��SO-50 SAUDISAT-1C
Catalog number: 27607
Launch date: December 20, 2002 1700z
Launch site: Baikonur, Kazakhstan

Status: Operational

Current Mode: V/u

Uplink: 145.850 MHz FM - 67.0 Hz PL tone
Downlink: 436.795 MHz

Mode and Antenna Polarization:
V: Linear
U: Linear

Official Webpage: http://saudisat.kacst.edu.sa/index.shtml
(not up and running currently)

To switch the transmitter on, you need to send a CTCSS tone of 74.4 Hz. The order of operation is thus: (allow for Doppler as necessary):
1) Transmit on 145.850 MHz with a tone of 74.4 Hz to arm the 10 minute timer on board the spacecraft.
2) Now transmit on 145.850 MHz (FM Voice) using 67.0 Hz to PT the repeater on and off within the 10 Minute window.
3) Sending the 74.4 tone again within the 10 minute window will reset the 10 minute timer.
[02092011]
��FO-29 JAS-2
Catalog number: 24278
Launch Date: August 17, 1996

Status: Operational
Current Mode: V/u (Mode JA)

Voice/CW (Mode JA)
Uplink: 145.90 to 146.00 MHz CW/LSB
Downlink: 435.80 to 435.90 MHz CW/USB
Beacon: 435.795 MHz

Digital Mode JD
Uplinks: 145.850 MHz FM
145.870 MHz FM
145.910 MHz FM
Downlink: 435.910 MHz 1200-baud BPSK or 9600-baud FSK
Callsign: 8J1JCS
Digitalker: 435.910 MHz

Mode and Antenna Polarization:
V: RHCP
U: RHCP

For current operational schedule for FO-29:
http://www.ne.jp/asahi/m-arai/gkz/satinfo/fo29e.htm

JARL English webpage:
http://www.jarl.or.jp/English/5_Fuji/ejasmenu.htm

AMSAT-NA Webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID
�retURL�atellites/status.php

Mineo Wakita, JE9PEL, has created a simple decoder program for FO29's CW telemetry downlink: http://www.ne.jp/asahi/hamradio/je9pel/fo29cwts.htm
[01122012]
��AO-27 AMRAD
Catalog number: 22825
Launch date: September 26, 1993 0140z
Launch site: Kourou, French Guiana

Status: Operational

Current Mode: V/u

Uplink: 145.850 MHz FM
Downlink: 436.797 MHz FM

Mode and Antenna Polarization:
V: Linear
U: Linear

Official Webpage: http://www.ao27.org
[02092011]
��AO-7 AMSAT OSCAR 7
Catalog number: 07530
Launch Date: November 15, 1974
Launch site: Vandenberg AFB, California, USA

Status: Operational

Current Mode: Alternating between Mode A and B every 24 hours

Uplink: 145.850 to 145.950 MHz CW/USB Mode A
432.125 to 432.175 MHz CW/LSB Mode B
Downlink: 29.400 to 29.500 MHz CW/USB Mode A (1W PEP)
145.975 to 145.925 MHz CW/USB Mode B (8W PEP)
145.975 to 145.925 MHz CW/USB Mode C (2W PEP)
Beacons: 29.502 MHz CW
145.972 MHz CW
435.100 MHz CW
2304.100 MHz CW

Official Webpage:
http://www.amsat.org/amsat-new/satellites/sat_summary/ao7.php
[04242012]
��INTERNATIONAL SPACE STATION (ISS) - ARISS
Catalog number: 25544
Launch date: November 20, 1998 0640z (ZARYA module)
Launch sites: Baikonur, Kazakhstan
Kourou, French Guiana
Uchinoura Space Center, Japan
Kennedy Space Center, Titusville, Florida, USA

Status: Operational

Current Active Modes: FM Repeater - OFF
Voice - V/v
BBS - OFF
2m APRS - ON
70cm Digi - ON
SSTV - OFF

Expedition 31 Crew (April 2012 - July 2012):
Commander: Oleg Kononenko RN3DX
Flight Engineer: Andr Kuipers PI9ISS
Flight Engineer: Don Pettit KD5MDT

Flight Engineer:
Flight Engineer:
Flight Engineer:

Available Modes and Frequencies:
Digital/APRS:
Worldwide 2m packet uplink: 145.825 MHz FM 1k2
Worldwide 2m packet downlink: 145.825 Mhz FM 1k2
Worldwide 70cm packet downlink: 437.550 Mhz FM 1k2
Worldwide 70cm packet downlink: 437.550 Mhz FM 1k2

Voice:
Region 1 voice uplink: 145.200 MHz FM
Region 2/3 voice uplink: 144.490 MHz FM
Worldwide downlink: 145.800 MHz FM

Crossband Repeater:
Repeater Uplinks: 1269.650 MHz FM
437.800 MHz FM
145.990 MHz FM - 67.0 PL (Kenwood)
Repeater Downlink: 145.800 MHz FM
437.800 MHz FM (Kenwood)

SSTV Robot 36:
Downlink: 145.800 MHz FM

Mode and Antenna Polarization:
V: Linear
U: Linear

Callsigns:
Belgian: OR4ISS
German: DP0ISS
Russian: RS0ISS
RZ3DZR
United States: NA1SS
2m Packet Mailbox: RS0ISS-11
2m Digipeater alias: ARISS
70cm Packet Mailbox: RS0ISS-1
70cm Digipeater callsign: RS0ISS
70cm Digipeater alias: ARISS

Official ARISS Webpage: http://www.rac.ca/ariss
ISS Fan Club Webpage: http://www.issfanclub.com
APRS tracking page: http://www.ariss.net/

ISS Daily Crew Schedule: http://spaceflight.nasa.gov/station/timelines
Remember that the crew operates on UTC time. Also, all of the time
line is NOT translated from Russian and posted.
[04302012]
NNNN
/EX

SB SAT @ AMSAT W8ISS $WSR-128.S2
WSR 128 Part 2 05/07/2012

AMSAT NEWS SERVICE BULLETIN 128.S2
FROM AMSAT HQ SILVER SPRING, MD, May 07, 2012
TO ALL RADIO AMATEURS
BID: $WSR-128.S2

XaTcobeo
Catalog Number: 38082
Launch Date: Febrauary 13, 2012
Launch Site: Kourou, French Guiana

Status: Operational

Uplink:
Downlink: 437.365 MHz FFSK with AX.25

Beacon:

Callsign:

URL:

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum5
[03162012]
��UniCubeSat
Catalog Number:
Launch Date: Febrauary 13, 2012
Launch Site: Kourou, French Guiana

Status: Operational

Uplink:
Downlink: 437.305 MHz 9k6 bps FSK

Beacon:

Callsign:

URL:

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum3
[03162012]
��Robusta
Catalog Number:
Launch Date: Febrauary 13, 2012
Launch Site: Kourou, French Guiana

Status: On Orbit

Uplink:
Downlink: 437.325 MHz 1k2 FM telemetry (data every 1 min, 20 sec. burst)

Beacon:

Callsign:

URL:

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum2
[02142012]
��MO-72 MaSat-1
Catalog Number: 38081
Launch Date: Febrauary 13, 2012
Launch Site: Kourou, French Guiana

Status: Operational

Uplink:
Downlink: 437.345 MHz GFSK 625/1250 bps
437.345 MHz CW

Beacon:

Callsign:

URL:

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum6
[03232012]
��Goliat
Catalog Number: 38085
Launch Date: Febrauary 13, 2012
Launch Site: Kourou, French Guiana

Status: Operational

Uplink:
Downlink: 437.485 MHz 1k2 AFSK

Beacon:

Callsign:

URL:

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum�
[03162012]
��E-Star
Catalog Number: 38079
Launch Date: Febrauary 13, 2012
Launch Site: Kourou, French Guiana

Status: On Orbit

Uplink:
Downlink: 437.445 MHz 1k2 bps AFSK

Beacon:

Callsign:

URL:

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum0
[03232012]
��ALMASat1
Catalog Number: 38078
Launch Date: Febrauary 13, 2012
Launch Site: Kourou, French Guiana

Status: On Orbit

Uplink:
Downlink: 437.465 MHz 1k2 bps FSK
2407.850 MHz

Beacon:

Callsign:

URL:

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum9
[02212012]
��RS-39 Chibis-M
Catalog Number: 37841
Launch Date: October 30, 2011 10:11:00 UTC
Launch site: Tyuratam (Baikonur Cosmodrome), Kazakhstan

Status: Operational

Uplink:
Downlink:

Beacon: 435.315 MHz CW
435.215 MHz CW

Callsign:

URL:

IARU coordination status page:
[01122012]
��JUNGU
Catalog Number: 37841
Launch Date: October 12, 2011 05:30:00 UTC
Launch site: Satish Dhawan Space Centre, India

Status: On Orbit

Uplink: 145.??? MHz 1k2 (mode?)
Downlink: 437.505 MHz 9k6 (mode?)

Beacon: 437.275 MHz 15 wpm (?) CW

Callsign:

URL: http://www.iitk.ac.in/me/jugnu/index.htm

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum0
[01122012]
��SRMSAT
Catalog Number: 37839
Launch Date: October 12, 2011 05:30:00 UTC
Launch site: Satish Dhawan Space Centre, India

Status: On Orbit

Uplink: 145.900 MHz 1k AX.25 (speed?)
Downlink: 437.500 MHz 2k4 AX.25

Beacon: 437.425 MHz 12 wpm CW

Callsign:

URL: http://srmsat.in/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum1
[01122012]
��HRBE (E1P Explorer 1 [Prime] CubeSat (E1P-U2))
Catalog Number: 37855
Launch Date: October 28, 2011
Launch site: Vandenberg Air Force Base, California, USA

Status: On Orbit

Uplink: 437.305 MHz (???)
Downlink: 437.505 MHz AX.25 (SSB?)

Beacon:

Callsign:

URL: http://ssel.montana.edu/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum6
[01122012]
��M-Cubed
Catalog Number: 37855
Launch Date: October 28, 2011
Launch site: Vandenberg Air Force Base, California, USA

Status: On Orbit

Uplink:
Downlink: 437.485 MHz AX.25

Beacon:

Callsign:

URL: http://umcubed.org/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum!5
[01122012]
��RAX-2
Catalog Number: 37853
Launch Date: October 28, 2011
Launch site: Vandenberg Air Force Base, California, USA

Status: Operational

Uplink:
Downlink: 437.345MHz 9k6 GMSK

Beacon:

Callsign:

URL: http://rax.engin.umich.edu//

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum"1
[03232012]
��AO-71 AubieSat-1
Catalog Number: 37854
Launch Date: October 28, 2011
Launch site: Vandenberg Air Force Base, California, USA

Status: On Orbit

Uplink:
Downlink: 437.475 MHz 1k2 AX.25

Beacon: 437.475 MHz CW

Callsign: KI4NQO

URL: http://www.space.auburn.edu/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum8
[12262011]
��O/OREOS
Catalog Number: 37224
Launch Date: November 20, 2010
Launch site: Kodiak Launch Complex, Alaska, USA

Status: On Orbit

Uplink:
Downlink: 437.035 MHZ AX.25

Beacon:

Callsign:

URL: http://www.ooreos.org/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum6
[02092011]
��Rax-1 Radio Aurora Explorer
Catalog Number: 37223
Launch Date: November 20, 2010
Launch site: Kodiak Launch Complex, Alaska, USA

Status: On Orbit

Uplink:
Downlink: 437.505 MHz 9k6 GMSK

Beacon:

Callsign: RAX-1

URL: http://rax.engin.umich.edu/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum5
[02092011]
��FO-69 Fastrac-1 Sara Lily
Catalog Number: 37227
Launch Date: November 20, 2010
Launch site: Kodiak Launch Complex, Alaska, USA

Status: Operational

Uplink 1: 145.980 MHz 1k2 baud
Uplink 2: 145.825 MHz 1k2 baud
Downlink: 437.345 MHz 1k2 and 9k6 baud

Beacon: 437.435 MHz 1k2 AX.25

Callsign: Fast1

URL: http://fastrac.ae.utexas.edu/index.php

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum�
[07052011]
��FO-70 Fastrac-2 Emma
Catalog Number: 37380
Launch Date: November 20, 2010

Launch site: Kodiak Launch Complex, Alaska, USA

Status: Operational

Uplink 1: 435.025 MHz 1k2 baud
Uplink 2: 437.435 MHz 9k6 baud
Downlink: 145.825 MHz 1k2 and 9k6 baud

Beacon: 145.825 MHz 1k2 AX.25

Callsign: Fast2

URL: http://fastrac.ae.utexas.edu/index.php

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=
[12162011]
==StudSat
Catalog Number: 36796
Launch Date: July 12, 2010 0352z
Launch site: Satish Dhawan Space Centre, India

Status: On Orbit

Uplink: 437.505MHz, 9600bps FSK
Downlink: 437.505MHz, 9600bps FSK
Beacon : 437.505MHz, 20bps ASK

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum4
[02092011]
==TIsat-1
Catalog Number: 36799
Launch Date: July 12, 2010 0352z
Launch site: Satish Dhawan Space Centre, India

Status: On orbit

Callsign: HB9DE

Uplink: 145.980MHz FM, AFSK
Downlink: 437.305MHz FM, AFSK
Beacon: 437.305MHz CW

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum8
[02092011]
==SwissCube
Catalog Number: 35932
Launch Date: September 23, 2009 0621z
Launch site: Satish Dhawan Space Centre, India

Status: Operational

Callsign: HB9EG

Beacon(100mw): 437.5050MHz CW
Beacon(1w): 437.5050MHz FSK 1k2bps

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum9
[02092011]
��UWE-2
Catalog Number: 35934
Launch Date: September 23, 2009 0621z
Launch site: Satish Dhawan Space Centre, India

Status: In Orbit

Beacon(500mw): 437.3850 MHz AFSK 1k2bps
437.3850 MHz FSK 9k6bps

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum0
[02092011]
��ITUpsAT1
Catalog Number: 35935
Launch Date: September 23, 2009 0621z
Launch site: Satish Dhawan Space Centre, India

Status: Operational

Beacon(100mw): 437.325MHz CW
Beacon(1w): 437.325MHz 19k2bps

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum3
[02092011]
��BEESAT
Catalog Number: 35933
Launch Date: September 23, 2009 0621z
Launch site: Satish Dhawan Space Centre, India

Status: Operational

Callsign: DP0BEE

Beacon(100mw): 436.000MHz CW
Beacon(500mw): 436.000MHz GMSK 4k8bps
Beacon(500mw): 436.000MHz GMSK 9k6bp
[02092011]
��CP-6
Catalog Number: 35004
Launch Date: May 19, 2009 2355z
Launch site: Wallops Island, Virginia, USA

Status: Operational

Downlink: 437.365 MHz 1k2 AFSK

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum1
[01122012]
��HAWKSAT 1
Catalog number: 35003
Launch Date: May 19, 2009 2355z
Launch site: Wallops Island, Virginia, USA

Status: operational

Downlink: 437.345 MHz ?

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum5
[01122012]
��Pharmasat
Catalog Number: 35002
Launch Date: May 19, 2009 2355z
Launch site: Wallops Island, Virginia, USA

Status: Operational

Downlink: 437.465 MHz 1k2 AFSK

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum�
[02092011]
��ANUSAT
Catalog Number: 34808
Launch Date: April 20, 2009 0115z
Launch Site: Satish Dhawan Space Centre, India

Status: ?

Downlink: 435.000 MHz
Uplink: 145.800 MHz

Telemetry: 137.400 MHz
[02092011]
��SOHLA-1 (ASTRO TECH.)
Catalog Number: 33496
Launch Date: January 23, 2009 0354z
Launch site: Tanegashima Space Center, Japan

Status: Operational

Proposed Frequencies and Modes:
Downlink: 437.505 MHz AFSK/CW
Beacon: 437.505 MHz AFSK/CW

Callsign:

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum1
[02092011]

��KAGAYAKI (Solan Co.)
Catalog Number: 33495
Launch Date: January 23, 2009 0354z
Launch site: Tanegashima Space Center, Japan

Status: In Orbit

Downlink: 437.375 MHZ FSK9k6/CW
Beacon: 437.375 MHz FSK9k6/CW

IARU coordination status page:

AMSAT-NA webpage:

[02092011]
��STARS (Kagawa Univ.) (Twin Satellites)
Catalog Number: 33498
Launch Date: January 23, 2009 0354z
Launch site: Tanegashima Space Center, Japan

Status: Operational ?

Downlinks: 437.485 MHz FM/CW
437.465 MHz FM/CW
Beacons: 437.305 MHz FM/CW
437.275 MHz FM/CW

Callsigns: JR5YBN
JR5YBO

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum�

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID1&retURL
�atellites/status.php
[02092011]
��KKS-1 (Tokyo MCIT)
Catalog Number: 33499
Launch Date: January 23, 2009 0354z
Launch site: Tanegashima Space Center, Japan

Status: Operational

Downlink: 437.455 MHz AFSK/CW
Beacon: 437.385 MHz AFSK/CW

Callsign: JQ1YYY

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum7

AMSAT-NA webapge:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID0&retURL

�atellites/status.php
[20092011]
��PRISM (Tokyo Univ.)
Catalog Number: 33493
Launch Date: January 23, 2009 0354z
Launch site: Tanegashima Space Center, Japan

Status: Operational ?

Downlink: 437.425 MHz AFSK/GMSK/CW
Beacon: 437.250 MHz AFSK/GMSK/CW

Callsign: JQ1YCX

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum�

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID9&retURL
�atellites/status.php
[02092011]
��RS-30 Radio Sputnik 30 (Yubileiny)
Catalog Number: 32953
Launch Date: May 23, 2008 1520z
Launch site: Plesetsk Missile and Space Complex, Russia

Status: Operational

Curent Modes: Telemetry
Audio
Images

Downlinks: 435.315 MHz
435.215 MHz

AMSAT-NA website:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID5&ret
URL�atellites/status.php

Official website:
http://www.npopm.com/?cid�oca&caidC
[02092011]
��CanX-2
Catalog number: 32790
Launch Date: April 28, 2008 0354z
Launch site: Satish Dhawan Space Centre, India

Status: Operational in range of ground station only

Downlink: 437.478 MHz GFSK

For the latest project status update please visit the Can X-2 web
page: http://www.utias-sfl.net/nanosatellites/CanX2/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnumF
[02092011]
��AAUSAT-II
Catalog number: 32788
Launch Date: April 28, 2008 0354z
Launch site: Satish Dhawan Space Centre, India

Status: Operational

Downlink: 437.425 MHz 1k2 baud packet

For the latest project status update please visit the AAUSAT-II web
page:
http://www.aausatii.aau.dk/homepage/index.php?language&page&me

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum`
[02092011]
��CO-65 CUTE-1.7+APD II
Catalog number: 32785
Launch Date: April 28, 2008 0354z
Launch site: Satish Dhawan Space Centre, India

Status: Operational

Downlink: 437.475 MHz 9k6 Packet
Uplink: 1267.600 Mhz

Telemetry Beacon:
Downlink: 437.2750 MHz CW

For the latest project status update please visit the Cute-1.7+APD II
web page: http://lss.mes.titech.ac.jp/ssp/cute1.7/index_e.html

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnumx

Command Station blog website:
http://lss.mes.titech.ac.jp/ssp/cute1.7/blog/

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID2&retURL
atellites/status.php
[03232012]
��Compass-1
Catalog number: 32787
Launch Date: April 28, 2008 0354z
Launch site: Satish Dhawan Space Centre, India

Status: Operational

Current Mode: dependant on last received command

Uplink: 145.980 MHz FM
Downlink: 437.275 Mhz CW
437.405 MHz Packet

For the latest project status update please visit the Compass 1 web
page: http://www.raumfahrt.fh-aachen.de/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnumR

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID4&retURL
=atellites/status.php
[06162011]
==CO-66 Seeds II
Catalog number:
Launch Date: April 28, 2008 0354z
Launch site: Satish Dhawan Space Centre, India

Status: Operational

Downlink: 437.485 MHz

Callsign: JQ1YGU

For the latest project status update please visit the Seeds 2 web
page: http://cubesat.aero.cst.nihon-u.ac.jp/english/seeds_2_e.html

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum6

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID3&retURL
=atellites/status.php
[02092011]
==CAPE-1
Catalog Number: 31130
Launch Date: April 17,2007 0702z
Launch site: Baikonur, Kazakhstan

Status: Intermittent

Current Mode: /u

TLM Downlink: 435.245 MHz 9600 bs FSK AX.25
CW Beacon: 435.245 MHz CW

Callsign: K5USL

TLM and CW interchange every 30 seconds.

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID=&retURL
/satellites/status.php

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnumr
[02092011]
��CP3
Catalog Number: 31129
Launch Date: April 17,2007 0702z
Launch site: Baikonur, Kazakhstan

Status: Operational

Current Mode: /u

Downlink: 436.845 MHz 1200 bps AFSK AX.25

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnumt
[02092011]
��CO-58 CubeSat XI-V
Catalog number: 28895
Launch Date: October 27, 2005 0652z
Launch site: Plesetsk Missile and Space Complex, Russia

Status: Operational - CW Beacon only

Current Mode: /u

Telemetry Downlink: 437.4250 MHz AFSK 1200bps using AFK protocol
Beacon: 437.2750 MHz CW

Callsign: JQ1YGW

Official Webpage: http://www.space.t.u-tokyo.ac.jp/cubesat/mission/V/

Pictures received by Mineo Wakita - JE9PEL:
http://www.ne.jp/asahi/hamradio/je9pel/xivpicte.htm

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum7
[02092011]
��CO-57 CubeSat XI-IV
Catalog number: 27848
Launch date: June 30, 2003 1415z
Launch site: Plesetsk Missile and Space Complex, Russia

Status: ?????

Current Mode: /u

Beacon: 436.8475 MHz CW
Telemetry : 437.4900 MHz AFSK 1200 BPS

Callsign: JQ1YGW

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID&#65533;&retURL
&#65533;atellites/status.php

Official Webpage: http://www.space.t.u-tokyo.ac.jp/cubesat/mission/V/
[02092011]
��QuakeSat
Catalog Number: 27845
Launch Date: June 30, 2003 1415z
Launch site: Plesetsk Missile and Space Complex, Russia

Status: Telemetry only

Current Mode: 9600 baud data packet

Mode U packet
Downlink: 436.675 MHz 9k6 BPS

Quakesat webpage:
http://www.quakefinder.com/services/quakesat-ssite/
[02252011]
��CO-55 Cute-1.7+APD II
Catalog Number: 27844
Launch date: June 30, 2003 1415z
Launch site: Plesetsk Missile and Space Complex, Russia

Status: Operational

Current Mode: CW downlink worldwide
AX25 Packet with uplink command over Japan only

Mode U Telemetry
Downlink: 437.4000 MHz AFSK 1200 BPS

Mode U TLM Beacon
Downlink: 436.8375 MHz CW

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satIDi&retURL
�atellites/status.php

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnumx
[02092011]
��NO-44 PCSAT
Catalog number: 26931
Launch Date: September 30, 2001 0240z
Launch site: Kodiak Launch Complex, Alaska, USA

Status: Telemetry only

Current Mode: V/v

General Usage Uplink/Downlink: 145.827 MHz 1200 Baud
Special Usage Downlink: 144.390 Mhz 1200 Baud

PCSAT APRS page: http://pcsat.aprs.org

aprstlm Telemetry Decoder program:
http://www.xciv.org/~iain/aprstlm/v1.2/
[02092011]
��RS-22 RADIO SPORT 22 (MOZHAYETS 4)
Catalog number: 27939
Launch Date: September 27, 2003 0612z
Launch site: Plesetsk Missile and Space Complex, Russia

Status: Operational - 70cm cw only

Current Mode: /u

CW Beacon - 435.352 MHz
145.818 MHz

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satIDv&retURL
�atellites/status.php
[02092011]
��LO-19 LUSAT
Catalog number: 20442
Launch date: January 22, 1990
Launch site: Kourou, French Guiana

Status: CW Beacon only

Uplinks: 145.840 MHz 1200-baud Manchester FSK
145.860 MHz 1200-baud Manchester FSK
145.880 MHz 1200-baud Manchester FSK
145.900 MHz 1200-baud Manchester FSK

CW downlink: 437.125 MHz

Digital downlink: 437.150 MHz SSB (RC-BPSK 1200-baud PSK)

Broadcast Callsign: LUSAT-11
BBS: LUSAT-12

General information and telemetry samples can be found at:
www.telecable.es/personales/ea1bcu
[02092011]
��UO-11 OSCAR-11
Catalog number: 14781
Launch Date: March 1, 1984
Launch site: Vandenburg AFB, California, USA

Status: Operational ?

Current Mode: /v

Telemetry Downlink: 145.825 MHz FM 1200 AFSK
UHFBeacon: 435.025 MHz
Mode-S Beacon: 2401.500 MHz

Mode and Antenna Polarization:
V: RHCP
S: LHCP

Webpage: http://www.users.zetnet.co.uk/clivew/
MPEG3 files: http://www.ne.jp/asahi/hamradio/je9pel/uo11tlme.htm
[07052011]
��INTERNATIONAL SPACE STATION (ISS) - ARISS
Catalog number: 25544
Launch date: November 20, 1998 0640z (ZARYA module)
Launch sites: Baikonur, Kazakhstan
Kourou, French Guiana
Uchinoura Space Center, Japan
Kennedy Space Center, Titusville, Florida, USA

Status: Operational

Current Active Modes: FM Repeater - OFF
Voice - V/v
BBS - OFF
2m APRS - ON
70cm Digi - ON
SSTV - OFF

Expedition 30 Crew (November 2011 - July 2012):
Commander: Oleg Kononenko RN3DX
Flight Engineer: Andr� Kuipers PI9ISS
Flight Engineer: Don Pettit KD5MDT
Flight Engineer:
Flight Engineer:
Flight Engineer:

Available Modes and Frequencies:
Digital/APRS:
Worldwide 2m packet uplink: 145.825 MHz FM 1k2
Worldwide 2m packet downlink: 145.825 Mhz FM 1k2
Worldwide 70cm packet downlink: 437.550 Mhz FM 1k2
Worldwide 70cm packet downlink: 437.550 Mhz FM 1k2

Voice:
Region 1 voice uplink: 145.200 MHz FM
Region 2/3 voice uplink: 144.490 MHz FM
Worldwide downlink: 145.800 MHz FM

Crossband Repeater:
Repeater Uplinks: 1269.650 MHz FM
437.800 MHz FM
145.990 MHz FM - 67.0 PL (Kenwood)
Repeater Downlink: 145.800 MHz FM
437.800 MHz FM (Kenwood)

SSTV Robot 36:
Downlink: 145.800 MHz FM

Mode and Antenna Polarization:
V: Linear
U: Linear

Callsigns:
Belgian: OR4ISS
German: DP0ISS
Russian: RS0ISS
RZ3DZR
United States: NA1SS
2m Packet Mailbox: RS0ISS-11
2m Digipeater alias: ARISS
70cm Packet Mailbox: RS0ISS-1
70cm Digipeater callsign: RS0ISS
70cm Digipeater alias: ARISS

Official ARISS Webpage: http://www.rac.ca/ariss
ISS Fan Club Webpage: http://www.issfanclub.com
APRS tracking page: http://www.ariss.net/

ISS Daily Crew Schedule: http://spaceflight.nasa.gov/station/timelines
Remember that the crew operates on UTC time. Also, all of the time
line is NOT translated from Russian and posted.
[04302012]
NNNN
/EX

SB SAT @ AMSAT W8ISS $WSR-128.S3
WSR 128 Part 3 05/07/2012

AMSAT NEWS SERVICE BULLETIN 128.S3
FROM AMSAT HQ SILVER SPRING, MD, May 07, 2012
TO ALL RADIO AMATEURS
BID: $WSR-128.S3

THE FOLLOWING ARE IN ORBIT BUT ARE NON-OPERATIONAL AT THIS TIME:

NANOSAIL-D
Catalog Number: 37361(?)
Ejection Date: January 17, 2011

Status: Non - Operational

Downlink: 437.270 MHz AX.25

URL: http://nanosaild.engr.scu.edu/dashboard.htm

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum5
[04302012]
��HO-68 HOPE-1 (CAS-1)(XW-1)
Catalog Number: 36122
Launch Date: December 15, 2009 0231z
Launch site: Taiyuan Space Center, PRC

Status: Telemetry only

Callsign:
Broadcast: BJ1SA-11
BBS: BJ1SA-12

Uplinks: 145.8250 MHz FM, PL 67.0 Hz.
145.9250 - 145.9750 MHz SSB/CW
145.8250 MHz AFSK 1200 BPS
Downlinks: 435.6750 MHz FM
435.7650 - 435.7150 MHz SSB/CW
435.6750 MHz AFSK 1200 BPS

Beacon: 435.7900 MHz CW

Mode and Antenna Polarization:
V: LHCP 2.0dBi max
U: RHCP 3.0dBi max

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum8

For more information about XW-1 (CAS-1):
http://
[04302012]
��SO-67 SumbandilaSat
Catalog Number: 35870
Launch Date: September 17, 2009 1555z
Launch site: Baikonur, Kazakhstan

Status: Non - Operational

Callsign: ZS0SUM

Uplink: 145.875MHz FM tone 233.6 Hz
Downlink: 435.345MHz FM

Mode and Antenna Polarization:
V: Linear
U: Linear

For more information about SO-67:
http://www.amsatsa.org.za/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum�
[01272012]
��CP4
Catalog Number: 31132
Launch Date: April 17, 2007

Status: Non-Operational

Current Mode: /u

TLM Downlink: 437.325 MHz 1200 bps FSK AX.25
CW Beacon: 437.325 MHz CW

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnumy
[09062010]
��LIBERTAD-1
Catalog Number: 31128
Launch Date: April 17, 2007

Status: Non-Operational

Current Mode: V/u APRS Packet ax25

Callsign: 5K3L

Uplink: 145.825 MHz 1200 AFSK ax25 APRS
Downlink: 437.399 MHz 1200 AFSK ax25 APRS

Telemetry Beacon: 437.4050 MHz 1200 AFSK ax25

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnumv
[09062010]
��PO-63 PEHUENSAT-1
Catalog Number: 29712
Launch Date: January 10, 2007

Status: Non-Operational

Current Mode: V/v

Uplink/Downlink: 145.825 Mhz FM
Voice Recorder: 145.825 Mhz FM

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnumQ
[09062010]
��NCUBE-2
Catalog number: 28897
Launch Date: October 27, 2005

Status: Still attached to XO-53 (SSETI)?

Proposed Callsign: TBA
Proposed Transmit Frequency: 437.305
2407.250

Official Website: http://www.ncube.no

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum$
[09062010]
��XO-53 SSETI
Catalog number: 28894

Launch Date: October 27, 2005

Status: Non-operational

Voice Uplink: 437.250 MHz FM 67Hz CTCSS
Voice Downlink: 2401.835 MHz FM
Packet Up/Downlink: 437.250 MHz 9k6 packet
Packet Downlink 2401.835 MHz 38k4 packet

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnumT
[09062010]
��UWE-1
Catalog Number: 28892
Launch Date: October 27, 2005

Status: Non-Operational

Mode U Telemetry
Downlink: 437.5050 MHz 9600 AFSK

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnumS
[09062010]
��AO-51 ECHO
Catalog number: 28375
Launch date: June 29, 2004 0745z
Launch site: Baikonur, Kazakhstan

Status: Non - Operational

Current Mode(s):
Voice repeater: V/u
Uplink: 145.880 MHz FM
Downlink: 435.150 MHz FM

Telemetry: Recovery efforts
Downlink: 435.150MHz 9k6

Analog voice downlink: 435.300 MHz FM
435.150 MHz FM
2401.200 Mhz FM
Analog voice uplink: 145.860 MHZ FM
145.880 MHz USB
145.880 MHz FM
145.920 MHz FM
145.920 MHz FM - 67 Hz PL tone burst
1268.705 MHz FM
Digital Downlinks: 435.150 MHz FM 38k4 PBP, 1 watt output
435.150 MHz FM 9k6 Pacsat Broadcast Protocol
2401.200 MHz FM 38k4 bps, AX.25
Digital Uplink: 145.860 MHz FM 9k6 Pacsat Broadcast Protocol
1268.703 mhz FM 9k6 Pacsat Broadcast Protocol

Beacon: 435.150 MHz

Mode and Antenna Polarization:
T: Linear
V: Linear
U: TX A (usually digital)LHCP
TX B (usually analog) RHCP
L: Linear
S: Linear

Broadcast: PECHO-11
BBS: PECHO-12

Official Webpage: http://www.amsat.org/amsat-new/echo/CTNews.php

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum
[12062011]
��CANX-1
Catalog Number: 27847
Launch Date: June 30, 2003

Status: Non-Operational

Downlink: 437.8800 MHz AFSK 1k2bps
[06052009]
��DTUSAT
Catalog Number: 27842
Launch Date: June 30, 2003

Status: Non-Operational

Current Mode: 2k4 AFSK Packet last reported

Downlink: 437.475MHz

Officail webpage: http://dtusat1.dtusat.dtu.dk/

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID1&retURL
�tellites/all_oscars.php
[02212009]
��AO-49 AATiS OSCAR-49 (SAFIR-M)
Catalog number: 27605
Launch Date: December 20, 2002

Status: Non-operational.

Uplink: 435.275 MHz 1200-baud AFSK
Downlink: 145.825 MHz 9600-baud FSK
(optional voice message)

Broadcast callsign: DP0AIS

Official webpage: http://amend.gmxhome.de
[01222007]
��MO-46 TIUNGSAT-1
Catalog number: 26548
Launch date: September 26, 2000

Status: Telemetry only

Uplinks: 145.850 MHz
145.925 MHz 9600-baud FSK
Downlink: 437.325 MHz

Broadcast callsign: MYSAT3-11
BBS: MYSAT3-12

TiungSat-1 is Malaysia's first micro-satellite and in addition to
commercial land and weather imaging payloads offers FM and FSK
Amateur Radio communication.

TiungSat-1, named after the mynah bird of Malaysia, was developed as
a collaborative effort between the Malaysian government and Surrey
Satellite Technology Ltd.
[03302009]
��NO-45 SAPPHIRE
Catalog number: 26932
Launch Date: September 30, 2001

Status: Non-Operational

Downlink: 437.095 MHz 1200 baud AX-25 AFSK
Uplink: 145.945 MHz UI Digipeater
Digi Callsign: KE6QMD

Everyone is welcome to use the digipeating/APRS features of Sapphire,
as per the user service agreement located at the following URL:
http://web.usna.navy.mil/~bruninga/pcsat/contract.txt
[03132005]
��SO-42 SAUDISAT-1B
Catalog number: 26549
Launch date: September 26, 2000

Status: Non-Operational

Downlink: 437.075 MHz

Broadcast Callsign: SASAT2-11
BBS: SASAT2-12

Further information is available at:
http://www.amsat.org/amsat/sats/n7hpr/so42.html
[01222007]
��SO-41 SAUDISAT-1A
Catalog number: 26545
Launch Date: September 26, 2000

Status: Non-Operational

Uplink: 145.850 MHz
Downlink: 436.775 MHz

Broadcast Callsign: SASAT1-11
BBS: SASAT1-12

Further information is available at:
http://www.amsat.org/amsat/sats/n7hpr/so41.html
[01222007]
��AO-40 AMSAT OSCAR 40
Catalog number: 26609
Launch Date: November 16, 2000

Status: Non-Operational

Uplinks

V-band: 145.840 - 145.990 MHz CW/LSB
U-band: 435.550 - 435.800 MHz CW/LSB
L1-band: 1269.250 - 1269.500 MHz CW/LSB
L2-band: 1268.325 - 1268.575 MHz CW/LSB

Downlinks

S2-band: 2401.225 - 2401.475 MHz CW/USB
K-band: 24048.010 - 24048.060 MHz CW/USB
Beacon: 2401.323 MHz
24048.035 MHz

P3-D Telemetry Beacons (IHU)

BEACON General Beacon(GB) Middle Beacon(MB) Engineering Beacon(EB)
2 m none 145.898 MHz none
70cm 435.438 MHz 435.588 MHz 435.838 MHz
13cm(1) 2400.188 MHz 2400.338 MHz 2400.588 MHz
13cm(2) 2401.173 MHz 2401.323 MHz 2401.573 MHz
3cm 10450.975 MHz 10451.125 MHz 10451.375 MHz
1.5cm 24047.885 MHz 24048.035 MHz 24048.285 MHz
[07162007]
��OO-38 OPAL
Catalog Number: 26063
Launch Date: January 27, 2000

Status: Non-Operational

Mode U TLM Beacon
Downlink: 437.1000 MHz 9600 FSK
[08132007]
��UO-36 UoSAT-12
Catalog number: 25693
Launch date: April 21, 1999

Status: Unknown

Uplink: 145.960 MHz (9600-baud FSK)
Downlinks: 437.025 MHz
437.400 MHz

Broadcast Callsign: UO121-11
BBS: UO121-12

The VK5HI viewer shareware for UO-36 is available on the AMSAT-NA web
site at the following URL:
ftp://ftp.amsat.org/amsat/software/win32/display/ccddsp97-119.zip
[01222007]
��SO-35 SUNSAT
Catalog Number: 25636
Launch date:February 23, 1999

Status: Non-Operational

Downlink: Mode B Repeater: 436.291 MHz
Mode J Digipeater: 436.250 MHz

Uplinks: Mode B Repeater: 145.825 MHz
Mode J Digipeater: 145.825 MHz
145.900 MHz

For more information of SUNSAT vist the satellite web site:
http://esl.ee.sun.ac.za/projects/sunsat/
[01222007]
��PO-34 PANSAT
Catalog number: 25520
Launch date: October 30, 1998

Status: Telemetry downloads only

Uplink/downlink: 436.500 MHz

Official Webpage: http://www.sp.nps.navy.mil/pansat/
[05092004]
��SO-33 SEDSAT-1
Catalog number: 25509
Launch date: October 24, 1998

Status: Semi-operational

Downlink: 437.910 MHz FM (9600-baud FSK)

The satellite is not currently available for uplink transmissions and
the image and transponder recovery efforts have been unsuccessful.

For more information on SedSat-1 visit the satellite web site:
http://seds.uah.edu/projects/sedsat/sedsat.htm
[09042006]
��GO-32 Gurwin TechSat-1B
Catalog number: 25397

Launch Date: July 10, 1998

Status: Non-Operational

Current Modes:
Telemetry : /u

Downlink: 435.225 MHz FM (9600-baud FSK)
435.325 Mhz - Not Available - temperature problems
Uplinks: 145.850 FM
145.890 FM
145.930 FM
1269.700 FM
1269.800 FM
1269.900 FM

Broadcast Callsign: 4XTECH-11
BBS Callsign: 4XTECH-12

More information of GO-32 can be found at:
http://asri.technion.ac.il/techsat/

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID&retURL
�atellites/status.php
[07172010]
��TO-31 TMSAT-1
Catalog number: 25396
Launch Date: July 10, 1998

Status: Non-operational

Uplink: 145.925 MHz 9600 baud FSK
Downlink: 436.925 MHz 9600 baud FSK

Broadcast callsign: TMSAT1-11
BBS: TMSAT1-12
[05012006]
��MO-30 UNAMSAT-2
Catalog Number: 24305
Launch Date: September 5, 1996

Status: Non-operational

Downlink: 435.1380 MHz AFSK 1200 BPS
Downlink: 435.2060 MHz AFSK 1200 BPS
Uplink: 145.8150 MHz AFSK 1200 BPS
Uplink: 145.8350 MHz AFSK 1200 BPS
Uplink: 145.8550 MHz AFSK 1200 BPS
Uplink: 145.8750 MHz AFSK 1200 BPS
[06042009]
��PO-28 POSAT-1
Catalog number: 22829

Launch Date: September 25, 1993

Status: Non-operational

Downlink: 429.950
Uplink: Not until handover back to Amatuer usage

Broadcast callsign: POSAT1-11
BBS callsign: POSAT1-12

AMSAT Webpage: http://www.amsat.org/amsat/sats/n7hpr/po28.html
POSAT-1 webpage:
http://www.ee.surrey.ac.uk/SSC/CSER/UOSAT/missions/posat1.html
[01012009]
��IO-26 ITAMSAT
Catalog number: 22826
Launch Date: September 26, 1993

Status: PSK carrier only

Current Mode:

Uplinks: 145.875 MHz FM 1200-baud
145.900 MHz FM 1200-baud
145.925 MHz FM 1200-baud
145.950 MHz FM 1200-baud

Downlink: 435.808 MHz PSK

Broadcast Callsign: ITMSAT-11
BBS: ITMSAT-12

Official webpage: http://www.itamsat.org
AMSAT Webpage: http://www.amsat.org/amsat/sats/n7hpr/io26.html
[01212007]
��KO-25 KITSAT
Catalog number: 22828
Launch date: September 26, 1993

Status: Non-operational

Uplink: 145.980 MHz FM 9600-baud FSK
Downlink: 436.500 MHz FM

Broadcast Callsign: HL02-11
BBS: HL02-12
[05092004]
��AO-24 ARSENE
Catalog Number: 22654
Launch Date: May 13, 1993

Status: Non-operational

Uplink: 435.0625 MHz FM 1k2bps AFSK
435.1125 MHz FM 1k2bps AFSK
435.1375 MHz FM 1k2bps AFSK
Downlink: 145.9750 MHz FM 1k2bps AFSK
2446.5025 MHz FM 1k2bps AFSK

Beacon: 2446.4700 MHz CW

Broadcast callsign:
BBS:
[12162009]
��KO-23 KITSAT
Catalog number: 22077
Launch date: August 10, 1992

Status: Non-operational

Uplink: 145.900 MHz FM (9600-baud FSK)
Downlink: 435.170 MHz FM

Broadcast Callsign: HLO1-11
BBS: HLO1-12
[01222007]
��UO-22 UOSAT
Catalog number: 21575
Launch date: July 17, 1991

Status: Non-Operational

Uplink: 145.900 FM 9600-baud FSK
Downlink: 435.120 MHz FM

Broadcast Callsign: UOSAT5-11
BBS: UOSAT5-12
[01222007]
��AO-21 AMSAT-OSCAR 21
Catalog Number: 21087
Launch Date: January 29, 1991

Status: Non-Operational

Uplink: 435.041 MHz FM DSP
Downlink: 145.983 MHz FM DSP
[01222007]
��FO-20 JAS-1b
Catalog number: 20480
Launch Date: February 07, 1990

Status: Non-Operational

Beacons: 435.795 MHz CW
435.910 MHz AX25

Voice Transponder:
Uplink: 145.900 to 146.000 MHz CW/LSB

Downlink: 435.800 to 435.900 MHz CW/USB

Digital Transponder:
Uplinks: 145.850 MHz
145.870 MHz
145.890 MHz
145.910 MHz
Downlink: 435.910 MHz

More FO-20 info can be found at:
http://www.amsat.org/amsat/sats/n7hpr/fo20.html
[01152007]
��WO-18 WEBERSAT
Catalog Number: 20441
Launch Date: January 22, 1990

Status: Non-Operational

Downlink: 437.104 MHz SSB 1200 Baud PSK AX.25
[05012006]
��DO-17 Dove
Catalog Number: 20440
Launch Date: January 22, 1990

Status: Non-operational.

Downlink: 145.825 MHz FM 1200 Baud AFSK
Beacon: 2401.220 MHz
[05012006]
��AO-16 PACSAT
Catalog number: 20439
Launch Date: January 22, 1990

Status: non-operational

Current Mode: V/u

Uplink: 145.900 MHz FM 1200-baud Manchester FSK (reserved)
145.920 MHz FM VOICE
145.940 MHz FM 1200-baud Manchester FSK (reserved)
145.960 MHz FM 1200-baud Manchester FSK (reserved)

Downlink: 437.026 MHz USB VOICE
(1200-baud PSK - MBL Telemetry Only)

Mode-S Beacon: 2401.1428 MHz [NO FUTURE OPERATIONS PLANNED]

Mode and Antenna Polarization:
U: RC 437.050 MHz RHCP
PSK 437.026 MHz LHCP
V: Linear

Broadcast Callsign: PACSAT-11
BBS: PACSAT-12

AO-16 AMSAT Webpage: http://www.amsat.org/amsat/sats/n7hpr/ao16.html
[07242009]
��UO-15 UoSAT-4
Catalog Number: 20438
Launch Date: January 22, 1990

Status: Non-operational

Uplink: ?
Downlink: 435.1250MHz (?)
435.1200MHz (?)
[06042009]
��UO-14 UoSAT-3
Catalog number: 20437
Launch date: January 22, 1990

Status: Non-operational

Uplink: 145.975 MHz FM
Downlink: 435.070 MHz FM
[05092004]
��FO-12 Fuji-OSCAR 12
Catalog Number: 16909
Launch Date: August 12, 1986

Status: Non-Operational

Mode V/U (J) Linear Transponder (Inverting):
Uplink: 145.9000 - 146.0000 MHz SSB/CW
Downlink 435.8000 - 435.9000 MHz SSB/CW

Mode V/U (J) Packet:
Uplink: 145.8500 MHz MFSK 1200 BPS
Uplink: 145.8700 MHz MFSK 1200 BPS
Uplink: 145.8900 MHz MFSK 1200 BPS
Uplink: 145.9100 MHz MFSK 1200 BPS

Downlink 435.9100 MHz PSK 1200 BPS

Telemetry Beacon: 435.7950 MHz SSB/CW
[01152007]
��AO-10 OSCAR 10
Catalog number: 14129
Launch Date: June 16, 1983

Status: Non-operational

Uplink: 435.030 to 435.180 MHz CW/LSB
Downlink: 145.975 to 145.825 MHz CW/USB

Beacon: 145.810 MHz (unmodulated carrier)

W4SM has more information about the satellite at the following URL:
http://www.cstone.net/~w4sm/AO-10.html
[05092004]

��AO-8 AMSAT-OSCAR 8
Catalog Number: 10703
Launch Date: March 3, 1978

Status: Non-Operational

Mode V/U (J) Linear Transponder (Non-Inverting): Non-Operational
Uplink: 145.9000 - 146.0000 MHz SSB/CW
Downlink 435.1990 - 435.2000 MHz SSB/CW

Mode V/U (J) TLM Beacon: Non-Operational
Downlink 435.0950 MHz CW

Mode V/A (A) Linear Transponder (Non-Inverting): Non-Operational
Uplink: 145.8500 - 145.9000 MHz SSB/CW
Downlink 29.4000 - 29.5000 MHz SSB/CW

Mode V/A (A) TLM Beacon: Non-Operational
Downlink 29.4020 MHz CW
[01152007]
��AO-6 AMSAT-OSCAR 6
Catalog Number: 06236
Launch Date: October 15, 1972

Status: Non-Operational

Uplink: 145.9000 - 146.0000 MHz SSB/CW
Downlink: 29.4500 - 29.5500 MHz SSB/CW
Beacons: 29.450 MHz
435.100 MHz
[01312008]
��AO-5 Australis-OSCAR 5
Catalog Number: 04321
Launch Date: January 23, 1970

Status: Non-Operational

Telemetry Beacons: 144.0500 MHz CW
29.4500 MHz CW
[01152007]
��OSCAR III
Catalog Number: 01293
Launch Date: March 09, 1965

Status: Non-Operational

Uplink: 145.9750 - 146.0250 MHz SSB/CW
Downlink: 144.3250 - 144.3750 MHz SSB/CW
[01012007]
��RS-15 RADIO SPORT RS-15
Catalog number: 23439
Launch Date: December 26, 1994

Status: Non-operational

Uplink: 145.858 to 145.898 MHz CW/USB
Downlink: 29.354 to 29.394 MHz CW/USB

Beacon 1: 29.352 MHz (intermittent)
Beacon 2: 29.398 MHz

SSB meeting frequency: 29.380 MHz (unofficial)
[06202004]
��RS-13 RADIO SPORT RS-13
Catalog number: 21089
Launch date: February 5, 1991

Status: Non-operational

Uplink: 21.260 to 21.300 MHz CW/USB
Downlink: 145.860 to 145.900 MHz CW/USB

Beacon: 145.860 MHz

Robot: 145.908 MHz
[05232004]
��RS-12 RADIO SPORT RS-12
Catalog number: 21089
Launch date: February 5, 1991

Status: Non-operational

Uplink: 21.210 to 21.250 MHz CW/USB
Downlink: 29.410 to 29.450 MHz CW/USB

Beacon: 29.408 MHz

Robot: 29.454 MHz
[05232004]
NNNN
/EX

SB SAT @ AMSAT W8ISS $WSR-128.S4
WSR 128 Part 4 05/07/2012

AMSAT NEWS SERVICE BULLETIN 128.S4
FROM AMSAT HQ SILVER SPRING, MD, May 07, 2012
TO ALL RADIO AMATEURS
BID: $WSR-128.S4

THE FOLLOWING SATELLITES HAVE RE-ENTERED OR HAVE BEEN RETURNED SAFELY:

ARISSat-1
Catalog number: 37772
Launch date: August 03, 2011 1843z
Launch site: International Space Station

Status: Re-entered January 05, 2012

Callsign: RS01S

Current Mode(s):
Linear Transponder: U/v
Uplink: 435.758 to 435.742 MHz CW/LSB
Downlink: 145.922 to 145.938 MHz CW/USB

FM Telemetry/SSTV/Messages/ID:
Downlink: 145.950 MHz FM

Telemetry/Beacon:
Downlink: 145.939 MHz CW1
145.919 MHz CW2
145.920 MHz 1k BPSK USB
145.920 MHz 400b BPSK USB

Official Webpage:http://www.amsat.org/amsat-new/ARISSat/ARISSat.php

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/informal_detail.php?serialnum&#65533;
[01052012]
&#65533;&#65533;CAERUS
Catalog Number:
Launch Date: December 08, 2010 15:43:00 UTC
Launch site: Kennedy Space Center, Titusville, Florida, USA

Status: Re-entered December 22, 2010

Uplink:
Downlink: 437.600 MHz 1k2 AX.25

Beacon: 437.600 MHz CW

Callsign: KJ6FIX

URL:
http://www2.isi.edu/research/prj-serc/prj-serc_projects/prj-serc_projects
-8.
htm

IARU coordination status page:

[11102011]
&#65533;&#65533;CO-56 CUTE-1.7 + APD
Catalog number: 28941
Launch date: February 21, 2006

Status: Re-entered
Re-entered: October 25, 2009

Uplink: 1268.5000 MHz GMSK 9600 BPS
Downlink: 437.4700 MHz 1200 FM ax25 or SRLL (ACTIVE only near Japan?)

Telemetry Beacon: 437.3850 CW
Callsign: JQ1YPC

Information webpage:
http://lss.mes.titech.ac.jp/ssp/spacerium/cute1blog/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnumV
[09062010]
��BEVO-1 (DRAGONSAT-1)
Catalog Number: 35690
Launch Date: May 19, 2009

Status: Re-entered
Re-entered:

Downlink: 437.325 MHz 9k6 GMSK
437.325 MHz CW 20wpm

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum7
[07312009]
��AggieSat2 (DRAGONSAT-2)
Catalog Number: 35690
Launch Date: May 19, 2009

Status: Re-entered
Re-entered:

Downlink: 436.250 MHz 9k6 FHSS
[11112009]
��Pollux
Catalog Number: 35693
Launch Date: July 31, 2009

Status: Re-entered
Re-entered:

Callsign: POLLUX-1

Downlink: 145.825MHz 1k2 AX.25

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum9
[09062010]
��Castor (ANDE-2)
Catalog Number: 35694
Launch Date: July 31, 2009

Status: Re-entered
Re-entered:

Callsign: KD4HBO-1

Downlink: 145.825 MHz 1k2 AX.25

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum4

[09062010]
��NO-62 FCAL
Catalog Number: 29667
Launch Date: December 21, 2006

Status: Re-Entered
Re-entered: July 28, 2008

Downlink: 437.385 Mhz APRS AX25

Downlink ID: KD4HBO

Website: http://eng.usna.navy.mil/~bruninga/fcal.html

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnumY
[01012009]
��NO-61 ANDE
Catalog Number: 29664
Launch Date: December 21, 2006

Status: Re-Entered
Re-entered: December 25, 2007

Uplink/Downlink: 145.825 Mhz FM APRS AX25
[01032008]
��NO-60 RAFT-1
Catalog Number: 29661
Launch Date: December 21, 2006

Status: Re-Entered
Re-entered: May 30, 2007

Main Downlink: 145.825 Mhz FM APRS AX25
APRS Uplink: 145.825 MHz FM APRS AX25
Voice/PSK31 Uplink: 28.120 MHz

Packet to Voice ID: RAFT
[06112007]
��GENESAT-1
Catalog Number: 29655
Launch Date: December 16, 2006

Status: Re-Entered
Re-entered date: August 8, 2010

Current Mode: /u

Callsign: KE7EGC

Telemetry Beacon Downlink: 437.0695 MHz AFSK 1200 BPS

Official webpage: http://www.crestnrp.org/genesat1/ahc.html
[08082010]

��HO-59 HITSat
Catalog number: 29484
Launch date: September 22, 2006

Status: Re-Entered
Re-entered: June 18, 2008

Telemetry Downlink: 437.4250 MHz AFSK 1200 BPS
Beacon: 437.2750 MHz CW

Callsign: JR8YJT
[01012009]
��SO-43 Starshine 3
Catalog Number: 26929
Launch Date: September 30, 2001

Status: Re-Entered
Re-entered: January 21, 2003

Beacon: 145.825Mhz
[02212009]
NNNN
/EX

ANS is released worldwide via the AMSAT ANS e-mail reflector and a live radiocast on the AMSAT-NA 20-meter net held each Sunday on 14.282 MHz. Pre-net operations start at 18:00 UTC, with current ANS bulletins transmitted to the eastern U.S. at 19:00 UTC and to the western U.S. at 19:30 UTC.

Information on AMSAT-NA is available at the following URL:
http://www.amsat.org

Mailing address:
AMSAT-NA
850 Sligo Avenue, Suite 600
Silver Spring, Maryland 20910-4703

Voice: 301-589-6062
888-322-6728
FAX: 301-608-3410

Currently, AMSAT-NA supports the following (free) mailing lists:

* AMSAT News Service (ANS)
* General satellite discussion (AMSAT-BB)
* Orbit data (KEPS)
* Manned space missions (SAREX)
* District of Columbia area (AMSAT-DC)
* New England area (AMSAT-NE)
* AMSAT Educational Liaison mailing list (AMSAT-EDU)
* AMSAT K-12 Educational Liaison mailing list (AMSAT-K12)

A daily digest version is available for each list.

To subscribe, or for more list information, visit the following URL:
http://www.amsat.org/mailman/listinfo/ans

In addition to regular membership, AMSAT-NA offers membership in the President's Club. Members of the President's Club, as sustaining donors to AMSAT Project Funds, will be eligible to receive additional benefits. Application forms are available from the AMSAT-NA Office.

This week's Weekly Satellite Report Editor is James French, W8ISS.

ANS is always dedicated to past ANS editor 'BJ' Arts, WT0N, and to the memory of longtime AMSAT supporters Werner Haas, DJ5KQ, Dennis Kitchen, G0FCL and John Branegan GM4IHJ.

Please send any amateur satellite news or reports to: ans-editor{at}
amsat.org
NNNN
/EX

76. ANS-134 AMSAT News Service Weekly Bulletins

Newsgroup: rec.radio.amateur.space
Date: 2012-05-13 14:08:34 UTC
From: JoAnne Maenpaa <k9jkm@comcast.net>
Message-ID: <000901cd3111$de1537f0$9a3fa7d0$@net>
Source record: 126
Cross-posted to: rec.radio.amateur.space,rec.radio.info

AMSAT NEWS SERVICE
ANS-134

ANS is a free, weekly, news and information service of AMSAT North America, The Radio Amateur Satellite Corporation. ANS reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in designing, building, launching and communicating through analog and digital Amateur Radio satellites.

Please send any amateur satellite news or reports to:
ans-editor at amsat.org

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* Volunteers are needed to help at the AMSAT booth at Dayton. Gould *
* WA4SXM, is looking for volunteers to help man the AMSAT booth dur- *
* ing the 2012 Hamvention. People are needed all 3 days for 2 hour *
* shifts. Please send the days and times you are available to help *
* as well as how many shifts you are willing to work via e-mail to *
* wa4sxm at amsat.org. *
* Monitor http://www.amsat.org/amsat-new/hamvention/2012/Dayton.php *
* for the latest AMSAT at Dayton news and developments *
****

In this edition:
* 14 May Reservation Deadline for AMSAT/TAPR Banquet at Dayton
* AMSAT Theme at Dayton 2012: Running with Fox
* TAPR Forum at Dayton Hamvention
* Vietnam F-1 Cubesat Team Completed Successful Communication Test
* 15 May Deadline to Apply for ARRL TI-2 Space in the Classroom Institute
* NASA TV to Broadcast Three Hams Launch From Baikonur
* Satellite Shorts From All Over
* ARISS Status - 7 May 2012

SB SAT @ AMSAT $ANS-134.01
ANS-120 AMSAT News Service Weekly Bulletins

AMSAT News Service Bulletin 134.01
From AMSAT HQ SILVER SPRING, MD.
May 13, 2012
To All RADIO AMATEURS
BID: $ANS-134.01

14 May Reservation Deadline for AMSAT/TAPR Banquet at Dayton

The sixth annual joint AMSAT/TAPR Banquet will be held Friday evening, May 18, 2012 during the Dayton Hamvention.

The Banquet will be at the:

Kohler Presidential Banquet Center
4572 Presidential Way
Kettering, OH 45429
(just south of Dayton).

Reservations are required and must be made by Monday, 14 May 2012.
Seating is limited, so make your reservations early.

The price for the Banquet is $30 per person. Reserved tickets may
be picked up at the AMSAT booth at Hamvention on Friday, or at
the door.

You may make reservations for the 2012 AMSAT/TAPR Banquet online in
the AMSAT Store. AMSAT Presidents Club Gold members should let Martha
know if they are planning to attend the banquet.

For additional information contact Martha at the AMSAT office
(martha at amsat.org).

Banquet Schedule

+ 6:30 PM: Doors open and Cash bar is available with Beer, Wine,
Liquor and soft drinks.

+ 7:15 PM: Buffet Dinner service begins. The Center has a justly
deserved reputation for good food and service.

+ 8:15 PM: Presentation by Howard Long, G6LVB
Howard will be talking about his FUNcube Dongle, the
64 - 1700 MHz Software Defined Receiver. This innovative
USB device is the size of a thumbdrive and has an SMA
antenna socket. Multiple SDR control and display soft-
ware programs can be used with the FUNcube Dongle.

[ANS thanks Gould Smith, WA4SXM for the above information]

AMSAT Theme at Dayton 2012: Running with Fox

The 2012 Dayton Hamvention will be held this year on 18 - 20 May 2012.
As has been the case for the many years Hamvention will be at the Hara
Arena Complex on the north side of Dayton. AMSAT will occupy the same
booths (444-449) in Ball Arena, right across from the ARRL area and
just inside the door from the Satellite Demonstration area.

The AMSAT theme for 2012 is "Running with Fox". We will have multiple
exhibits of the new AMSAT satellite on display.

Visit AMSAT's Dayton Hamvention page for all details on activities:
http://www.amsat.org/amsat-new/hamvention/2012/Dayton.php

Some of the activities will include:

+ Life size Fox models will be on display as well as diagrams of the modules inside the 10cm square satellite.

+ Operational prototype of ARISSat-1 on display.

+ AMSAT Thursday Night Get-together at the Tickets Pub & Eatery.

+ The sixth annual AMSAT/TAPR Banquet will be Friday night May 18 at the Kohler Banquet Center. The price for the Banquet is $30. Seating is limited and reservations are required. Follow the links on AMSAT's Dayton page.

+ The AMSAT Forum will be on Saturday May 19.

AMSAT/TAPR Friday Night Banquet

AMSAT/TAPR Banquet on Friday night, May 18 is one of the main AMSAT activities during the 2012 Hamvention at Dayton.

AMSAT is pleased to announce that Howard Long, G6LVB will be the featured speaker for the evening event. Howard will be talking about his FUNcube Dongle, the 64 - 1700 MHz Software Defined Receiver. This innovative USB device is the size of a thumbdrive and has an SMA antenna socket. Multiple SDR control and display software programs can be used with the FUNcube Dongle.

Banquet tickets will not be sold at the AMSAT booth during the Hamvention so reservations must be made through the AMSAT Store:
http://www.amsat-na.com/store/item.php?id=100158
Tickets are $30 apiece.

ARISS Mentor Introduction at Dayton 2012

AMSAT and ARRL are teaming up during the 2012 Hamvention to recruit new ARISS (Amateur Radio on the International Space Station) Technical Mentors and Ground Station Operators.

Friday and Saturday (May 18 & 19) at 4pm in the ARRL stage area AMSAT Vice President for Educational Relations Mark Hammond N8MH will explain the need for additional ARISS Technical Mentors and Ground Station Operators and the requirements and responsibilities needed to help provide a reliable conversation between astronauts and selected schools or groups.

Technical Mentors serve as an advising and coordinating liaison between NASA, the school or group making the ARISS contact, and the Ground Station Operators, who set up the satellite station at the contact location. We encourage anyone interested in helping make future school contacts with the ISS successful to please attend.

AMSAT to Facilitate Student Satellite Contacts

AMSAT is encouraging all students attending the 2012 Dayton Hamvention to come by the Satellite Demonstration Area just outside of the Ball Area entrance and make a contact using the amateur satellites. There

will be AMSAT volunteers there to explain how to make the contacts and during actual satellite passes will try to get as many students as possible to complete actual contacts. There are lists of satellite pass times in the satellite demonstration area and at the AMSAT booth.

[ANS thanks Gould Smith, WA4SXM for the above information]

TAPR Forum at Dayton Hamvention

TAPR will be found in booths 455-459 in the Ball Arena of the Hara Arena at the Dayton Hamvention. They will be near AMSAT who will be found in booths 444-449 in the Ball Arena.

TAPR will feature several SDR projects which are gaining interest quickly in the amateur radio community. Details of TAPR projects and the group's plans for Dayton can be found in the PSR Digital Journal. The Spring 2012 edition is now available for download from: http://www.tapr.org/psr/psr118.pdf

The TAPR Forum gets underway in Room 1 of the Hara Arena at 9:15AM on Friday and runs until 11:15 AM. The TAPR Forum speakers include:

+ Introduction and TAPR Update by Steve Bible, N7HPR

+ Beyond openHPSDR: Hermes and the Future by Scotty Cowling, WA2DFI. Hermes is the latest addition to the openHPSDR stable of boards.

+ Embedded DSP for PCless SDR" by Lyle Johnson, KK7P. Self contained radios have been standard since the mid-1920s. Why should SDRs be different? For many applications especially portable operation not having to lug a PC around, or try and read its screen in bright ambient light, or depend on a laptop's battery charge level can be decided benefits. Advances in DSP technology allow self contained, highly portable SDRs that provide many hours of operation on small, internal battery packs.

+ Time and Frequency Update by John Ackermann, N8UR. After some down time, the TAPR T&F project list is moving forward. This presentation will discuss the new TADD2 Mini frequency divider that is now shipping, and will give a glimpse of new products in the pipeline.

+ CODEC 2 by David Rowe, VK5DGR. Codec2 is an open source low bit rate speech codec designed for communications quality speech at 2400bit/s and below. Applications include low bandwidth HF/VHF digital radio and VOIP trunking. Codec 2operating at 2000 bit/s can send 32 phone calls using the bandwidth required for one 64 kbit/s uncompressed phone call. It fills a gap in open source, free as in speech voice codecs beneath 5000 bit/s and is released under the GNU Lesser General Public License (LGPL).

[ANS thanks TAPR President Steven Bible, N7HPR and Stan Horzepa, WA1LOU for the above information]

Vietnam F-1 Cubesat Team Completed Successful Communication Test

Hanoi based FSpace team completed another important milestone in preparation for the July 18 launch when they successfully performed a long range communication test of F-1 CubeSat with a ground station at a distance of 50km. The team carried the little satellite to top of Tam Dao mountain in Vietnam (about 1300m high). A communication link of 50km with the ground station at the FPT building in Hanoi was established. Despite of heavy fog and high humidity (which was very bad for radio communication) the ground station successfully sent uplink commands to F-1 and the satellite responded correctly, reporting its status and taking some photos.

F-1 is one of five CubeSat teams preparing for a launch to the International Space Station in the July 18-21, 2012 time frame. These CubeSats will be launched from Tanegashima, Japan aboard the JAXA HTV-3 ISS resupply mission. The CubeSats will be loaded into the J-SSOD deployer on the Japanese Experiment Module, also known as Kibo. They will be deployed with the Kibo robotic arm planned for September, 2012 timeframe.

Other cubesats on this flight include:
+ HTV 3 (Kounotori 3)
+ Raiko
+ We Wish
+ FITSat 1
+ TechEdSat

The F-1 Cubesat team posted photos at: http://fspace.edu.vn/?p=557.

[ANS thanks the F-1 Cubesat Team for the above information]

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15 May Deadline to Apply for ARRL TI-2 Space in the Classroom Institute

The ARRL Education & Technology Program (ETP) is offering an advanced Teachers Institute (TI-2) session that focuses on space in the classroom. This four-day professional development workshop is sponsored by the Dayton Amateur Radio Association and is held in their location in Dayton, Ohio (July 9-12).

The TI-2 Space curriculum focuses on the nuts and bolts of setting up and operating a satellite ground station. This serves as excellent preparation for a scheduled contact with the ISS through the Amateur Radio on the International Space Station (ARISS) program. But it also provides instruction for continued use of satellites and other man made space assets to explore naturally generated signals, space and a variety of topics.

Thanks to generous assistance from Yaesu USA and Ham Radio Outlet, participants will receive a full ground station that is configured for satellite communications, as well as training on how to set it up and use it to make Amateur Radio contacts and download telemetry data.

To be considered for a seat in TI-2 Space, participants must possess at least a Technician class license at the time off application. ARRL membership is required. Priority for attending the TI-2 Space session will be given to teachers who have developed an educational proposal accepted for participation in the ARISS Program.

This session has a class limit of 8 participants, so apply early! The deadline for the TI-2 Space in the Classroom sessions of the Teachers Institute is May 15. This deadline is this week ... hurry!

Full details are posted on the ARRL web at:
http://www.arrl.org/ti-2-space-in-the-classroom

[ANS thanks the ARRL for the above information]

NASA TV to Broadcast Three Hams Launch From Baikonur

The next mission to the International Space Station will have three crew members who are licensed amateur radio operators. The crew consists of NASA Flight Engineer Joseph Acaba, KE5DAR, and two Russian crewmates, Soyuz Commander Gennady Padalka, RN3DT, and Flight Engineer Sergei Revin, RN3BS.

NASA will televise the launch and docking of the next mission to the ISS, scheduled for May 14, with live NASA TV coverage of the Soyuz TMA-04M spacecraft launch from the Baikonur Cosmodrome in Kazakhstan. Coverage begins at 9 PM CDT on Monday, May 14 (0200 UTC May 15), with the launch scheduled for 10:01 PM CDT (0301 UTC).

The trio will arrive at the station May 16, joining Expedition 31 Commander Oleg Kononenko, RN3DX, of the Russian Federal Space Agency, Flight Engineer Don Pettit, KD5MDT, of NASA and Flight Engineer Andrei Kuipers, PI9ISS, of the European Space Agency, who have been aboard the ISS since December 2011. Padalka, Acaba and Revin will transition to the Expedition 32 crew in July and return to Earth in mid-September.

NASA TV Schedule

+ Monday, May 14 - 9 PM CDT (0200 UTC May 15)
Soyuz TMA-04M launch coverage (launch scheduled at 10:01 PM [0301 UTC]), including video of the crew's pre-launch activities and launch replays.

+ Tuesday, May 15 - 12 AM CDT (0500 UTC)
Video file of Soyuz TMA-04M pre-launch, launch video and post-launch interviews.

+ Wednesday, May 16 - 11 PM CDT (0400 UTC)
Soyuz TMA-04M docking coverage (docking scheduled at 11:38 PM [0438 UTC]), followed by a post-docking news conference from Mission Control in Korolev, Russia.

+ Thursday, May 17 - 2 AM CDT (0700 UTC)
Soyuz TMA-04M hatch opening and welcoming ceremony (hatch opening scheduled at 2:20 AM [0720 UTC]).
4 AM CDT (0900 UTC) - Video file of Soyuz TMA-04M docking, hatch opening and welcoming ceremony.

You can watch live online on the NASA TV Public and Media channels, streamed live on the internet at http://www.nasa.gov/ntv or on your television set if your local provider carries the NASA TV channel in your area.

[ANS thanks the ARRL and NASA for the above information]

Satellite Shorts From All Over

+ AMSAT-UK posted a video made by Alexandru Csete OZ9AEC demonstrating the interference caused by FM emissions on the FO-29 linear transponder. Alexandru used the AMSAT-UK FUNcube Dongle and Gqrx SDR software to receive and record the signal. The video is posted at: http://www.uk.amsat.org/7260

+ Doug McArthur, VK3UM announced a software update to the VK3UM EMR Calculator program. The EMR (Electro Magnetic Radiation) software Version 7.00 has been revamped and enhanced for improved ease of use. It includes many examples, references and a Help file. It covers ARPNSA (Australian), FCC, and CEU Radio Frequency Emission Standards. It may also be configured for any other requirement outside the above Standards i.e. Russian Federation. Doug has several other programs such as his EME Calculator available for download on his website at: http://www.vk3um.com/

+ Hams like science, so enjoy these scientific music videos in the shack. The Symphony of Science is a musical project of John D Boswell, designed to deliver scientific knowledge and philosophy in musical form. See: http://symphonyofscience.com/

+ In his latest Science Off the Sphere video from the ISS, astronaut Don Pettit, allows us to 'see' sound waves in space. Watch and learn on-line at: http://www.physicscentral.com/explore/sots/

[ANS thanks everyone for the above information]

ARISS Status - 7 May 2012

1. ARISS - Virginia Contact Successful

On Wednesday, May 2, the Mariners' Museum in Newport News, Virginia experienced a successful Amateur Radio on the International Space Station (ARISS) contact with Don Pettit, KD5MDT via telebridge station IK1SLD in Italy. Groups in Virginia, Louisiana, New York, and Michigan were video conferenced together for the event. Approximately 350 students at the four locations got in seventeen questions before ISS went over the horizon. The contact highlighted a comprehensive Science, Technology, Engineering and Mathematics (STEM) education plan.

2. Ham Nation Features Flabob Contact

The ARISS contact with Astronaut Don Pettit and Flabob Airport Preparatory Academy students in Jurupa Valley, California that occurred on April 19, 2012, was featured on the May 1 episode (#46) of the Bob Heil & Gordon West "Ham Nation" video podcast. The video is now available on TwiT TV and Flabob sites.
Ham Nation: http://twit.tv/hn
Flabob site: http://www.iss-flabob.com

3. Astronaut Training Status

An introductory/basic operations session is planned for Alexander Gerst, KF5ONO on Wednesday, May 9. Gerst is scheduled to fly with Expedition 40 in May 2014.

[ANS thanks Carol, KB3LKI, for the above information]

/EX

In addition to regular membership, AMSAT offers membership in the President's Club. Members of the President's Club, as sustaining donors to AMSAT Project Funds, will be eligible to receive additional benefits. Application forms are available from the AMSAT Office.

Primary and secondary school students are eligible for membership at one-half the standard yearly rate. Post-secondary school students enrolled in at least half time status shall be eligible for the student rate for a maximum of 6 post-secondary years in this status. Contact Martha at the AMSAT Office for additional student membership information.

73,
This week's ANS Editor,
Lee McLamb, KU4OS

77. Weekly Highlights of Solar and Geomagnetic Activity, 07 - 13 May 2012

Newsgroup: rec.radio.amateur.space
Date: 2012-05-14 15:30:06 UTC
From: SWPC.Webmaster@noaa.gov
Message-ID: <20120514153001.3793533C57@panix2.panix.com>
Source record: 127
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.dx,rec.radio.amateur.space,rec.radio.shortwave,rec.radio.info

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:Product: Weekly Highlights and Forecasts
:Issued: 2012 May 14 1333 UTC
# Prepared by the US Dept. of Commerce, NOAA, Space Weather Prediction Center
# Product description and SWPC contact on the Web
# http://www.swpc.noaa.gov/weekly.html
#
# Weekly Highlights and Forecasts
#
Highlights of Solar and Geomagnetic Activity
07 - 13 May 2012

Solar activity ranged from low to moderate levels. Region 1476 (N10,
L=180, class/area=Fkc/1050 on 09 May) was responsible for almost all
x-ray flare activity during the week. It produced a total of 55
C-class flares, 6 M-class flares, and 69 optical flares. Region 1476
began the week as an Fkc type group with a beta-gamma magnetic
configuration. By the 8th, it had grown in extent (17 degrees), spot
count (35), and complexity (beta-gamma-delta) and produced an M1/1F
flare at 1308 UTC. It reached its maximum areal coverage of 1050
millionths on the 9th when it produced an M4/1n at 1232 UTC, an
M1/1b at 1408 UTC, and another M4 at 2105 UTC. The maximum extent
and spot count (20 degrees, 50 spots) followed on the 10th when
Region 1476 produced the largest of the flares, an M5/2b at 0418
UTC. The flare was accompanied by a three minute 10cm burst (690
sfu) at 10/0417 UTC and a Type IV emission at 10/0402 UTC, followed
by a weak earth-directed Coronal Mass Ejection (CME). Later that
day, Region 1476 produced an M1 at 2026 UTC, the last M-class event
of the week. The region then began a slow but steady decline in
areal coverage, longitudinal extent and spot count, although it
sustained its beta-gamma-delta magnetic configuration.

Earlier in the week, the only M-class event not produced by Region
1476 was an M1/1n flare observed from Region 1471 (S21, L=276,
class/area=Eho/320 on 02 May) at 07/1431 UTC. This flare was also
accompanied by a 10cm burst (230 sfu) at 10/1415 UTC and a Type IV
emission at 07/1409 UTC. STEREO-Ahead imagery suggested an
earth-directed CME. The following day, two more potentially
earth-directed, weak CMEs were observed in STEREO-A COR2 imagery.

Region 1477 (S24, L=140, class/area Dso/150 on 09 May) was split to
form new Region 1478 (S24, L=135, class/area=Hsx/090 on 10 May) on
10 May. Similarly, Region 1479 (N15, L=105, class/area Dso/130 on 12
May) was split to form new Region 1482 (N14, L=100,
class/area=Dso/080 on 13 May). Both of these divisions resulted from
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careful analysis of magnetogram data. After the split, Region 1477 became an Hsx type group with L=144, and Region 1479 became an Hxs type group near L=109.

No proton events were observed at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit was at high levels on the 10th through the 13th, and at moderate levels for the remainder.

Geomagnetic field activity ranged from quiet to active conditions with minor to major storm periods observed at high latitudes. The week began with quiet conditions on 7th and the majority of the 8th. Around 08/0400 UTC, a solar sector boundary crossing from positive to negative was observed at the ACE spacecraft. By midday, the solar wind speed at ACE began to rise, marking the arrival of a coronal hole high speed stream (CH-HSS). Significant southward Bz began around 1730 UTC and reached a minimum of -13 nT late on the 8th before beginning a gradual return to neutral conditions late on the 10th. The geomagnetic field responded with active conditions from the last synoptic period on the 8th through the 9th. Minor to major storm levels were observed at high latitudes on the 9th. Activity subsided to mostly unsettled levels on the 10th, followed by mostly quiet conditions on the 11-12 May. The solar wind speed at ACE remained above 500 km/s until around 13/0000 UTC. Conditions were mostly unsettled on the 13th. Although there were a number of CMEs identified as potentially earth-directed, there was no definitive indication of CME arrival reflected in the ACE data suggesting the transient signatures were obliterated in the high speed stream.

Forecast of Solar and Geomagnetic Activity
14 May - 09 June 2012

Solar activity is expected to be at low to moderate levels throughout the period, with moderate activity most likely with the return of Old Region 1476 on 31 May.

No proton events are expected at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit is expected to be at normal levels except on 14 May, 23-29 May, and 06-09 June. The high levels are expected in response to the presence of recurrent coronal hole high speed streams.

Geomagnetic field activity is expected to be quiet to unsettled with occasional active periods. The unsettled to active periods are associated with the geoeffective periods of recurrent CH-HSSs on 14 May, 21-23 May, and 05-08 June. Unsettled to occasionally active conditions are also expected on 14 May with the anticipated arrival of a CME from 12 May.

78. ANS-141 AMSAT News Service Weekly Bulletins

Newsgroup: rec.radio.amateur.space
Date: 2012-05-20 01:55:28 UTC
From: JoAnne Maenpaa <k9jkm@comcast.net>
Message-ID: <001601cd362b$9bea4e50$d3beeaf0$@net>
Source record: 128
Cross-posted to: rec.radio.amateur.space,rec.radio.info

AMSAT NEWS SERVICE
ANS-141

ANS is a free, weekly, news and information service of AMSAT North America, The Radio Amateur Satellite Corporation. ANS reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in designing, building, launching and communicating through analog and digital Amateur Radio satellites.

Please send any amateur satellite news or reports to:
ans-editor at amsat.org

In this edition:
* AMSAT Satellite Education Focus at Dayton
* Reminder - One Month to Field Day - AMSAT FD Rules On-Line
* Japan Amateur Radio CubeSat Launch May 17 - Telemetry on 437.325 MHz
* Three Hams Arrive at ISS & Prepare for SpaceX Dragon Arrival
* CubeSat Article in Time Magazine
* Promising Future of CubeSat Missions in UK Metro Newspaper
* Satellite Shorts From All Over

SB SAT @ AMSAT $ANS-141.01
ANS-141 AMSAT News Service Weekly Bulletins

AMSAT News Service Bulletin 141.01
>From AMSAT HQ SILVER SPRING, MD.
May 20, 2012
To All RADIO AMATEURS
BID: $ANS-141.01

AMSAT Satellite Education Focus at Dayton

This weekend marked the annual Dayton Hamvention. AMSAT was present and active inside at the booth in the Ball Arena of the Hara Center and outside at the Satellite Demonstration area. AMSAT Vice President for Educational Relations Mark Hammond, N8MH said, "This year, we had a focus on trying to get youth and first time operators ON THE AIR!" The Satellite Demonstration area gave students, educators, and first time hams the opportunity to come to the microphone and make a satellite contact. Between passes equipment and experienced operators were available for discussions and answers to questions. Differences in operating techniques between FM and linear satellites were demonstrated. Also differing levels of equipment ranging between very simple and portable stations to a full station with computer control were

operating.

Dayton also gave AMSAT and ARRL the opportunity to recruit new ARISS (Amateur Radio on the International Space Station) Technical Mentors and Ground Station Operators. Mark, N8MH took advantage of the ARRL Stage on Friday and Saturday to explain the roles of ARISS Technical Mentors who serve as an advising and coordinating liaison between NASA, the school or group making the ARISS contact, and the Ground Station Operators, who set up the satellite station at the contact location.

The AMSAT Forum at Dayton, moderated by Alan Biddle, WA4SCA also included Mark's presentation on the current and future education work. He described specific needs, especially in area of writing K-12 lesson plans (in science and math) using amateur satellite telemetry. Educators who are satellite operators should contact him directly at n8mh@amsat.org and are encouraged to join the AMSAT-EDU mailing list to learn how they can help with our educational outreach. (See: http://www.amsat.org/mailman/listinfo to join AMSAT-EDU.)

AMSAT's university level mentorship of CubeSat development projects was presented by Alex Harvilchuck, N3NP as he discussed CubeSats at Pennsylvania State University-Erie.

Also, at the AMSAT Forum, AMSAT Engineering VP, Tony Monteiro, AA2TX discussed Project Fox - AMSAT's First CubeSat which was accepted for launch by Project ELaNa, NASA's "Educational Launch of NanoSat". Fox-1 was selected to join the NASA ELaNa program on merit in support of NASA strategic and educational goals. The "Running With Fox" theme at the AMSAT booth featured a model of the Fox-1 cubesat.

[ANS thanks Gould Smith, WA4SXM, and Mark Hammond, N8MH for the above information]

Reminder - One Month to Field Day - AMSAT FD Rules On-Line

AMSAT Director Contests and Awards, Bruce Paige, KK5DO reminds you that time of year is once again approaching - Field Day!

Each year the American Radio Relay League (ARRL) sponsors Field Day as an emergency preparedness exercise. The event takes place during a 24-hour period on the fourth weekend of June. For 2012 the event takes place during a 27-hour period between 1800 UTC on Saturday, June 23, 2012 and 2100 UTC on Sunday June 24, 2012. Those who set up prior to 1800 UTC on June 23 can operate only 24 hours.

The Radio Amateur Satellite Corporation (AMSAT) promotes its own version of Field Day for operation via the amateur satellites, held concurrently with the ARRL event.

With the loss of AO-51 and SO-6ay this y ear is going to be most challenging. If you are considering ONLY the FM voice satellites

like AMRAD-OSCAR-27 or SaudiSat-Oscar-50 for your primary AMSAT Field Day focus: Don't, unless you are simply hoping to make one contact for the ARRL rules bonus points.

The congestion on FM LEO satellites was so intense in prior years that we must continue to limit their use to one-QSO-per-FM-satellite. This includes the International Space Station. You will be allowed one QSO if the ISS is operating Voice. You will also be allowed one digital QSO with the ISS or any other digital, non-store-and-forward, packet satellite (if operational).

If you have worked the satellites on Field Day in recent years, you may have noticed a lot of good contacts can be made on some of the less-populated, low-earth-orbit satellites like VUSat OSCAR-52,Fuji-OSCAR 29 (may or may not be operational), AMSAT-OSCAR 7. During Field Day the transponders come alive like 20 meters on a weekend. The good news is that the transponders on these satellites will support multiple simultaneous contacts. The bad news is that you can't use FM, just low duty cycle modes like SSB and CW.

The AMSAT Field Day 2012 event is open to all Amateur Radio operators. Amateurs are to use the exchange as specified in ARRL rules for Field Day. The AMSAT competition is to encourage the use of all amateur satellites, both analog and digital.

For the complete listing of the AMSAT Field Day Rules please refer to the documents posted on-line at:
http://www.amsatnet.com/fd2012.doc
http://www.amsatnet.com/fd2012.pdf
Links are also accessible from http://www.amsat.org front page.

[ANS thanks AMSAT Director Contests and Awards, Bruce Paige, KK5DO for the above information]

Japan Amateur Radio CubeSat Launch May 17 - Telemetry on 437.375 MHz

The May 17 launch from Japan of the H-IIA rocket delivered a JAXA climate observation satellite SHIZUKU (GCOM-W) and a South Korean earth observation mission KOMPSAT-3 into orbit also launched an amateur radio satellite HORYU-2, built by students at the Kyushu Institute of Technology (KIT).

The HORYU-2 Cubesat includes several experiments:
+ 300 volt power generation in LEO
+ COTS technology demonstration of surface potential measurement
+ Orbital debris observation
+ Earth photography

The satellite callsign is JG6YBW and radio amateurs are asked to listen for the 437.375 MHz telemetry downlink. The CW data is composed of an 11 character callsign "JG6YBW HORYU" followed by 15

characters of telemetry data. Details of the telemetry format are
available via a link on the AMSAT-UK web, see:
http://www.uk.amsat.org/7404

More information is available on the web:
Horyu website in Google English: http://tinyurl.com/HoryuSatellite
http://www.uk.amsat.org/6638
http://www.uk.amsat.org/4279
http://www.uk.amsat.org/7404
http://www.uk.amsat.org/7540 (showing Horyu-2 separation on-orbit)

Initial TLE set can be found on-line at:
http://kitsat.ele.kyutech.ac.jp/Documents/ground_station/TLE.txt

The 437.375 MHz telemetry downlink also transmits 1200 bps AX.25
packet radio. There is a monthly competition for those who send
data received from the telemetry to the KIT server, via the HORYU-2
telemetry analysis software which can be downloaded from:
http://kitsat.ele.kyutech.ac.jp/Documents/information_launch_english.html

Day 1 Initial Reception Reports

The CW signal from HORYU-2 was copied in South America by LW2DTZ on
437.375 MHz on May 17 on a 10 degree elevation pass using 7 element
yagi antenna. A strong downlink CW beacon signal was heard in Sudan
by ST2NH. GW1FKY reported a strong signal was heard in Wales, UK.
JE9PEL captured downlink telemetry from Japan.

[ANS thanks the Horyu-2 team and AMSAT-UK for the above information]

Three Hams Arrive at ISS & Prepare for SpaceX Dragon Arrival

The three crew members who are licensed amateur radio operators were
successfully launched on Monday aboard a Russian Soyuz TMA-04M space
craft from the Baikonur Cosmodrome in Kazakhstan and have arrived at
the International Space Station. The three ham crew consists of NASA
Flight Engineer Joseph Acaba, KE5DAR, and two Russian crewmates, Soy-
uz Commander Gennady Padalka, RN3DT, and Flight Engineer Sergei Revin,
RN3BS.

Their arrival brings the crew roster up to six as they join Expedi-
tion 31 Commander Oleg Kononenko, RN3DX, of the Russian Federal Space
Agency, Flight Engineer Don Pettit, KD5MDT, of NASA and Flight Engin-
eer Andrei Kuipers, PI9ISS, of the European Space Agency, who have
been aboard the ISS since December 2011.

NASA reported on the events after arrival of the crew in their ISS
On-Orbit Status report posted at: http://tinyurl.com/ISS-On-Orbit
The NASA ISS daily status report for May 18 notes that Joe, KE5DAR
also powered on the ham radio station in the Russian Service Module.
A NASA video report of the ISS crew activities can be viewed at:

http://www.youtube.com/watch?feature=player_embedded&v=bA9PXqX_L4Y

The new crew members will begin preparations for the arrival of an unmanned Dragon cargo ship built by SpaceX. Originally scheduled for launch on May 19, a faulty check valve on an engine caused an abort. SpaceX is replacing the failed valve. The next launch attempt is at present planned for Tuesday, May 22 at 3:44 AM EDT (UTC-4).

Dragon will deliver about 1150 pounds of food, clothing and other low-priority items. The capsule then will be repacked with around 1455 pounds of trash and no-longer-needed components and detached from the space station on May 31. SpaceX plans to guide the craft back to Earth for a parachute descent to a Pacific Ocean splashdown to complete the test flight. If the test flight goes well, SpaceX hopes to begin routine cargo delivery missions in August, 2012.

The Dragon capsule will also deliver 15 student experiments from the Student Spaceflight Experiments Program (SSEP). See:
http://www.space-travel.com/reports/Space_Station_Here_We_Come_999.html

Soon after Dragon a Russian Progress vehicle will arrive. In July a Japanese HTV cargo ship will arrive. The crew will also be managing over 215 scientific investigations affecting over 400 scientists on the ground.

An on-line Expedition 31 Mission Status page can be found at:
http://spaceflightnow.com/station/exp31/status.html
For additional details of the Soyuz launch see:
http://spaceflightnow.com/station/exp31/120514launch/
Archived video of the Soyuz launch can be viewed on-line at:
http://www.universetoday.com/95174/expedition-31-blasts-off/

[ANS thanks SpaceFlightNow.com and UniverseToday.com for the above information]

CubeSat Article in Time Magazine

In an article titled, "How a Pocket-Size Satellite Could Find Another Earth", Time Magazine reports that unlike the massive NASA Kepler probe the next mission to search for new planets will be a tiny CubeSat called ExoplanetSat.

Time says: What makes ExoplanetSat even more un-NASA-like is that it began as a class project - although admittedly, the class was at MIT. It was a design-and-build course, which the university's engineering students have to take in order to graduate. In a recent semester, the class was co-taught by Sara Seager [KB1WTW] an astrophysicist who has done groundbreaking research studying how the atmospheres of planets orbiting distant stars might look like from earthly telescopes. Seager recruited five science undergrads to join her engineers, on the

theory that out in the real world, they'd eventually have to work with engineers anyway.

The group is developing a prototype ExoplanetSat capable of monitoring a single, bright, sun-like star for two years. Planned to launch late 2012 or 2013 it is hoped it will open the gates for ExoplanetSat interest and funding. Once the funding doors are opened, then the fleet of ExoplanetSats can be launched. The fleet may contain as many as a hundred of these small satellites, each focused on its own star.

In a 2011 visit to Cambridge, UK, Sara said "The reason why we're excited is because we think that this is a really huge thing. Hundreds and thousands of years from now, people will look back and ask, what are the significant accomplishments of our society in the early twenty-first century? One of them will be that we were the first to discover other worlds and other worlds that might be like Earth. When you think back four hundred years, what do you remember? You think about Christopher Columbus and Lewis and Clark. It's the exploration-finding things that were new to our culture. And that's why we're excited."

Read the Times Magazine article at
http://www.time.com/time/health/article/0,8599,2114158,00.html

MIT paper on ExoplanetSat
http://dspace.mit.edu/openaccess-disseminate/1721.1/61644

AMSAT-UK article at: http://www.uk.amsat.org/7348

[ANS thanks AMSAT-UK for the above information]

Promising Future of CubeSat Missions in UK Metro Newspaper

The May 14, 2012 edition of the Metro newspaper carried a story by Ben Gilliland, "The next space age: Cuberty", on pages 26-27 about CubeSats. Among those mentioned is the UK amateur radio Android smartphone CubeSat STRaND-1 which is being built by volunteers at the Surrey Space Centre (SSC).

The online edition of the Metro newspaper can be read at:
http://e-edition.metro.co.uk/2012/05/14/
You will be prompted for an email address but anything that looks like an email address will keep the prompt happy and you can then read the newspaper.

Ben Gilliland's article is also available on the CosmOnline website at: http://www.cosmonline.co.uk/blog/2012/05/14/next-space-age-cuberty

See also: http://www.uk.amsat.org/7395

[ANS thanks Trevor, M5AKA and AMSAT-UK for the above information]

Satellite Shorts From All Over

+ It is time to submit nominations for the upcoming open seats on the AMSAT-NA Board of Directors. Three directors and two alternate directors have terms expiring this year. The director seats open for election are held by Tom Clark, K3IO; Lou McFadin, W5DID; and Gould Smith, WA4SXM. The alternate director seats open for election are held by Mark Hammond, N8MH and Patrick Stoddard, WD9EWK. The AMSAT front page news at http://www.amsat.org has the instructions to submit your nominations.

+ The 2012 AMSAT Annual Meeting and Symposium will be held at the Holiday Inn, Orlando (Florida) Airport on October 26-28, 2012. The First Call for Papers has been issued. The Symposium Team requests a tentative title of your presentation as soon as possible, with final copy to be submitted by October 1 for inclusion in the printed proceedings. Abstracts and papers should be sent to Dan Schultz, N8FGV, at n8fgv at amsat.org. Watch for the latest 2012 Symposium information to be posted on the AMSAT web at: http://www.amsat.org/amsat-new/symposium/2012/index.php

+ While the AMSAT on-line store is closed due to technical issues you can place an order through the AMSAT office. The hours are 10:00 AM - 6:00 PM EDT. Our phone number is 301-589-6062. Martha is looking forward to hearing from you!

+ Clint Bradford, K6LCS and Rich Arland K7SZ collaborated on an article, "Learning Curve - Working the Birds" which was just published in the May, 2012 Dayton Special issue of CQ magazine.

+ The future plans of the QB50 network of 50 CubeSats in a 'string-of-pearls' configuration that will be launched together in the first half of 2015 by a single rocket has caught the attention of the press. The UK Daily Mail published an article how the network of 50 satellites aims to find out what happens INSIDE the northern lights and hopefully 'forecast' solar weather.
See: http://tinyurl.com/UKMail-QB50

+ A Video showing a time lapse view of Earth's Northern Hemisphere from Russia's Electro-L Weather Satellite is posted at: http://www.spaceref.com/news/viewsr.html?pid=40807

+ Two videos, one of the Aalto-1, about Finland's first satellite project, showing their new groundstation and an animation of the mission is posted on the AMSAT-UK web at: http://www.uk.amsat.org/7371

+ Though likely no operation on amateur radio satellites at this time, the re-planned TX5, Clipperton Island DXpedition has a plan to utilize satellites. The Cordell Expeditions is pleased to announce a DXpedition to Clipperton Island in early 2013. The team of 24 will sail from San Diego on February 19, 2013, and will be

active from Clipperton for 10 days starting around March 1. They will be active on all bands and all modes, and will use DXA, the satellite-linked system that displays near-real-time log data on any Web browser. They state, "We invite your participation in this project, as a team member, supporter, or callsign in our log!"
Clipperton Island Web page: http://www.cordell.org/CI/index.html
Details of DXA satellite program: http://www.cordell.org/DXA/
The DXA program is also planned to be used on a Cordell Expeditions trip to VK0H, Heard Island in early 2014.
(via Ohio/Penn DX Bulletin #1062, and #1062.2)

+ 51 years ago on May 5, 1961, NASA launched the Mercury-Redstone 3 rocket carrying Alan B. Shepard, Jr. aboard the Freedom 7 capsule. Shepard successfully became America's first man in space, making a brief but historic suborbital test flight that propelled American astronauts into the space race of the 1960s. NASA has compiled a video from from photographs taken by a film camera mounted to the Freedom 7 spacecraft. Compare the view in 1961 with the latest generation of space video we routinely receive from the ISS. Watch at: http://www.universetoday.com/95016/the-view-from-freedom-7/

+ Tom Doyle, W9KE posted a video demonstrating a feature he hoped to turn into a SatPC32 Add-On. It provides a "Look Down" perspective as if you were a passenger aboard the satellite. The video is HD and looks best viewed full screen in 720p. Watch it at:
http://www.youtube.com/watch?v=g1K1sIw_F8Y

+ Check out the view of the Big Dipper from 290 million km away taken by NASA's Juno spacecraft en route to Jupiter:
http://tinyurl.com/Juno-Big-Dipper (UniverseToday.com)

[ANS thanks everyone for the above information]

/EX

In addition to regular membership, AMSAT offers membership in the President's Club. Members of the President's Club, as sustaining donors to AMSAT Project Funds, will be eligible to receive additional benefits. Application forms are available from the AMSAT Office.

Primary and secondary school students are eligible for membership at one-half the standard yearly rate. Post-secondary school students enrolled in at least half time status shall be eligible for the student rate for a maximum of 6 post-secondary years in this status. Contact Martha at the AMSAT Office for additional student membership information. And with that please keep in mind if you were to take all of the water on Earth, all of the fresh water, sea water, ground water, water vapor and water inside our bodies, take all of it and somehow collect it into a single, giant sphere of liquid, it would make a ball 860 miles (1,385 km) in diameter, only about as wide

edge-to-edge as the distance between Salt Lake City to Topeka,
Kansas. That's it.

73,
This week's ANS Editor,
JoAnne Maenpaa, K9JKM

79. Weekly Highlights of Solar and Geomagnetic Activity, 14 - 20 May 2012

Newsgroup: rec.radio.amateur.space
Date: 2012-05-21 19:30:05 UTC
From: SWPC.Webmaster@noaa.gov
Message-ID: <20120521193001.F0FDB33C57@panix2.panix.com>
Source record: 129
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.dx,rec.radio.amateur.space,rec.radio.shortwave,rec.radio.info

```
:Product: Weekly Highlights and Forecasts
:Issued: 2012 May 21 1636 UTC
# Prepared by the US Dept. of Commerce, NOAA, Space Weather Prediction Center
# Product description and SWPC contact on the Web
# http://www.swpc.noaa.gov/weekly.html
#
# Weekly Highlights and Forecasts
#
Highlights of Solar and Geomagnetic Activity
14 - 20 May 2012

Solar activity ranged from very low to moderate levels. Region 1476
(N09, L=180, class/area Fkc/1050 on 09 May) continued to be the
major contributor of x-ray flare activity throughout the week. It
produced 13 C-class flares and an M-flare. Region 1476 began the
week as an Fko type group with a beta-gamma configuration. As it
rotated off the west limb on 17 May, the region produced an M5/1f
flare at 17/0147 UTC. This event was accompanied by a 22 minute 10cm
Radio Burst (600 sfu) at 17/0142 UTC, Type II (645 km/s) and Type IV
radio sweeps, and a partial halo CME. The CME was first observed by
the SOHO/LASCO C3 spacecraft beginning at 17/0206 UTC with an
estimated plane-of-sky speed of approximately 1200 km/s. The
majority of the ejecta was directed off the west limb. Region 1476
continued to produce C-class flares as it rotated off the visible
disk on 18 May. A filament eruption produced a CME that was observed
in STEREO A COR 2 imagery (plane-of-sky speed approximately 482
km/s) beginning at 18/0709 UTC on 18 May. The ejecta was slightly
north of the ecliptic plane, however a glancing blow is possible
from that event.

A greater than 10 MeV and greater than 100 MeV proton event at
geosynchronous orbit was observed associated with the 17 May M5
flare. The greater than 10 MeV proton event began at 17/0210 UTC and
reached a peak flux of 255 pfu at 17/0430 UTC, ended at 18/1620UTC.
The greater than 10 MeV proton event crossed the 100 pfu threshold
(S2) at 17/0245 UTC and fell below 100 pfu at 17/0945 UTC. The
greater than 100 MeV proton event began at 17/0200 UTC and reached a
maximum of 20 pfu at 17/0230 UTC, ended at 17/1725 UTC.

The greater than 2 MeV electron flux at geosynchronous orbit was at
moderate to high levels from 14 through 16 May. Moderate levels were
observed from 17 through 20 May.
```

Geomagnetic field activity ranged from quiet to active levels. Quiet levels were observed on 15, 17, and 19 May. Quiet to unsettled levels were observed on 14 and 18 May. Quiet to unsettled levels with isolated active periods were observed on 16 and 20 May. On 16 May, an extended period of the southward Bz component of the interplanetary magnetic field caused an isolated active level during the 16/2100 - 2400 UTC period. At approximately 20/0136 UTC, the ACE satellite ovserved an interplanetary shock passage with a corresponding weak sudden impulse observed in the Boulder magnetometer (15 nT) at 20/0215 UTC. The shock passage was likely associated with the 17 May CME. The geomagnetic field responded with an isolated active period during the 20/0300 - 0600 UTC period.

Forecast of Solar and Geomagnetic Activity
21 May - 16 June 2012

Solar activity is expected to be at very low to low levels with a slight chance for M-class flares through 31 May and again from 14 June through the end of the forecast period. Low to moderate levels are expected from 31 May through 13 June due to the return of old Region 1476.

A chance for a greater than 10 MeV proton event at geosynchronous orbit exists from 31 May through 13 June due to the return of old Region 1476.

The greater than 2 MeV electron flux at geosynchronous orbit is expected to be at normal levels on 21 - 23 May, 30 May - 05 June, and again on 13 - 16 June. High levels are expected on 24 - 29 May and again on 06 - 12 June. High levels are in response to recurrent coronal hole high speed wind streams.

Geomagnetic field activity is expected to be quiet to active on 22 - 23 May as the arrival of the 18 May CME as well as a coronal hole high speed stream become geoeffective. Quiet to active conditions are also expected on 06 - 09 June as another recurrent coronal hole high speed stream moves into geoeffective position. Mostly quiet to unsettled conditons are expected for the remainder of the forecast period.

80. WSR-142 AMSAT Weekly Satellite Report

Newsgroup: rec.radio.amateur.space
Date: 2012-05-24 13:06:09 UTC
From: JoAnne Maenpaa <k9jkm@comcast.net>
Message-ID: <000c01cd39ad$e782b200$b6881600$@net>
Source record: 130
Cross-posted to: rec.radio.amateur.space,rec.radio.info

This report is organized into three (3) parts.
Part 1 (S1) - operational analog amateur satellites
Part 2 (S2) - operational digital amateur satellites
Part 3 (S3) - non - operational satellites

SB SAT @ AMSAT W8ISS $WSR-142.S1
WSR 142 Part 1 05/21/2012

AMSAT NEWS SERVICE BULLETIN 142.S1
FROM AMSAT HQ SILVER SPRING, MD, May 21, 2012
TO ALL RADIO AMATEURS
BID: $WSR-142.S1

PW-Sat
Catalog Number:
Launch Date: Febrauary 13, 2012
Launch Site: Kourou, French Guiana

Status: On Orbit

Uplink: 435.020 MHz FM
Downlink: 145.900 MHz DSB

Beacon:

Callsign:

URL:

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum2
[03162012]
��DO-64 Delfi-C3
Catalog number: 32789
Launch Date: April 28, 2008 0354z
Launch site: Satish Dhawan Space Centre, India

Status: Operational
Current Mode: Science Mode - Beacon ONLY

Telemetry: 145.870 MHz

Downlink: 145.880 to 145.920 MHz
Uplink: 435.530 to 435.570 MHz

Delfi-C3 web page: http://www.delfic3.nl/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnumh
[02092011]
��VO-52 HAMSAT
Catalog number: 28650
Launch Date: May 05, 2005 0444z
Launch site: Satish Dhawan Space Centre, India

Status: Operational
Current Mode: U/v - Dutch Transponder

Frequencies:
Indian Transponder:
Uplink: 435.220 to 435.280 MHz LSB/CW
Downlink: 145.930 to 145.870 MHz USB/CW

Dutch Transponder:
Uplink: 435.225 to 435.275 MHz LSB/CW
Downlink: 145.925 to 145.875 MHz USB/CW

Indian Beacon: 145.9360 MHZ CW
Dutch Beacon: 145.860 MHz 12WPM with CW message

Mode and Antenna Polarization:
V: LHCP
U: RHCP

Official Webpage: http://www.amsatindia.org/hamsat.htm

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum0

To know what transponder is switched on please listen for the beacon
that is active. Each transponder has a different beacon.
[03232012]
��SO-50 SAUDISAT-1C
Catalog number: 27607
Launch date: December 20, 2002 1700z
Launch site: Baikonur, Kazakhstan

Status: Operational

Current Mode: V/u

Uplink: 145.850 MHz FM - 67.0 Hz PL tone
Downlink: 436.795 MHz

Mode and Antenna Polarization:
V: Linear
U: Linear

Official Webpage: http://saudisat.kacst.edu.sa/index.shtml
(not up and running currently)

To switch the transmitter on, you need to send a CTCSS tone of 74.4 Hz. The order of operation is thus: (allow for Doppler as necessary):
1) Transmit on 145.850 MHz with a tone of 74.4 Hz to arm the 10 minute timer on board the spacecraft.
2) Now transmit on 145.850 MHz (FM Voice) using 67.0 Hz to PT the repeater on and off within the 10 Minute window.
3) Sending the 74.4 tone again within the 10 minute window will reset the 10 minute timer.
[02092011]
��FO-29 JAS-2
Catalog number: 24278
Launch Date: August 17, 1996

Status: Operational
Current Mode: V/u (Mode JA)

Voice/CW (Mode JA)
Uplink: 145.90 to 146.00 MHz CW/LSB
Downlink: 435.80 to 435.90 MHz CW/USB
Beacon: 435.795 MHz

Digital Mode JD
Uplinks: 145.850 MHz FM
145.870 MHz FM
145.910 MHz FM
Downlink: 435.910 MHz 1200-baud BPSK or 9600-baud FSK
Callsign: 8J1JCS
Digitalker: 435.910 MHz

Mode and Antenna Polarization:
V: RHCP
U: RHCP

For current operational schedule for FO-29:
http://www.ne.jp/asahi/m-arai/gkz/satinfo/fo29e.htm

JARL English webpage:
http://www.jarl.or.jp/English/5_Fuji/ejasmenu.htm

AMSAT-NA Webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID
�retURL�atellites/status.php

Mineo Wakita, JE9PEL, has created a simple decoder program for FO29's CW telemetry downlink: http://www.ne.jp/asahi/hamradio/je9pel/fo29cwts.htm
[01122012]
��AO-27 AMRAD
Catalog number: 22825
Launch date: September 26, 1993 0140z
Launch site: Kourou, French Guiana

Status: Operational

Current Mode: V/u

Uplink: 145.850 MHz FM
Downlink: 436.797 MHz FM

Mode and Antenna Polarization:
V: Linear
U: Linear

Official Webpage: http://www.ao27.org
[02092011]
��AO-7 AMSAT OSCAR 7
Catalog number: 07530
Launch Date: November 15, 1974
Launch site: Vandenberg AFB, California, USA

Status: Operational

Current Mode: Alternating between Mode A and B every 24 hours

Uplink: 145.850 to 145.950 MHz CW/USB Mode A
432.125 to 432.175 MHz CW/LSB Mode B
Downlink: 29.400 to 29.500 MHz CW/USB Mode A (1W PEP)
145.975 to 145.925 MHz CW/USB Mode B (8W PEP)
145.975 to 145.925 MHz CW/USB Mode C (2W PEP)
Beacons: 29.502 MHz CW
145.972 MHz CW
435.100 MHz CW
2304.100 MHz CW

Official Webpage:
http://www.amsat.org/amsat-new/satellites/sat_summary/ao7.php
[04242012]
��INTERNATIONAL SPACE STATION (ISS) - ARISS
Catalog number: 25544
Launch date: November 20, 1998 0640z (ZARYA module)
Launch sites: Baikonur, Kazakhstan
Kourou, French Guiana
Uchinoura Space Center, Japan
Kennedy Space Center, Titusville, Florida, USA

Status: Operational

Current Active Modes: FM Repeater - OFF
Voice - V/v
BBS - OFF
2m APRS - ON
70cm Digi - ON
SSTV - OFF

Expedition 31 Crew (April 2012 - July 2012):
Commander: Oleg Kononenko RN3DX
Flight Engineer: Andr Kuipers PI9ISS
Flight Engineer: Don Pettit KD5MDT

Flight Engineer: Joe Acaba KE5DAR
Flight Engineer: Gennady Padalka RN3DT
Flight Engineer: Sergei Revin RN3BS

Available Modes and Frequencies:
Digital/APRS:
Worldwide 2m packet uplink: 145.825 MHz FM 1k2
Worldwide 2m packet downlink: 145.825 Mhz FM 1k2
Worldwide 70cm packet downlink: 437.550 Mhz FM 1k2
Worldwide 70cm packet downlink: 437.550 Mhz FM 1k2

Voice:
Region 1 voice uplink: 145.200 MHz FM
Region 2/3 voice uplink: 144.490 MHz FM
Worldwide downlink: 145.800 MHz FM

Crossband Repeater:
Repeater Uplinks: 1269.650 MHz FM
437.800 MHz FM
145.990 MHz FM - 67.0 PL (Kenwood)
Repeater Downlink: 145.800 MHz FM
437.800 MHz FM (Kenwood)

SSTV Robot 36:
Downlink: 145.800 MHz FM

Mode and Antenna Polarization:
V: Linear
U: Linear

Callsigns:
Belgian: OR4ISS
German: DP0ISS
Russian: RS0ISS
RZ3DZR
United States: NA1SS
2m Packet Mailbox: RS0ISS-11
2m Digipeater alias: ARISS
70cm Packet Mailbox: RS0ISS-1
70cm Digipeater callsign: RS0ISS
70cm Digipeater alias: ARISS

Official ARISS Webpage: http://www.rac.ca/ariss
ISS Fan Club Webpage: http://www.issfanclub.com
APRS tracking page: http://www.ariss.net/

ISS Daily Crew Schedule: http://spaceflight.nasa.gov/station/timelines
Remember that the crew operates on UTC time. Also, all of the time
line is NOT translated from Russian and posted.
[05152012]
NNNN
/EX

SB SAT @ AMSAT W8ISS $WSR-142.S2
WSR 142 Part 2 05/21/2012

AMSAT NEWS SERVICE BULLETIN 142.S2
FROM AMSAT HQ SILVER SPRING, MD, May 21, 2012
TO ALL RADIO AMATEURS
BID: $WSR-142.S2

HORYU-II
Catalog number:
Launch Date: May 17, 2012

Status; On Orbit

Uplink: 145.??? MHz
Downlink: 437.375 MHz CW/AX25/FSK

Beacon: 437.375 MHz CW

Callsign: JG6YBW

URL:

IARU Coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum!6
[05212012]
��XaTcobeo
Catalog Number: 38082
Launch Date: Febrauary 13, 2012
Launch Site: Kourou, French Guiana

Status: Operational

Uplink:
Downlink: 437.365 MHz FFSK with AX.25

Beacon:

Callsign:

URL:

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum5
[03162012]
��UniCubeSat
Catalog Number:
Launch Date: Febrauary 13, 2012
Launch Site: Kourou, French Guiana

Status: Operational

Uplink:
Downlink: 437.305 MHz 9k6 bps FSK

Beacon:

Callsign:

URL:

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum3
[03162012]
��Robusta
Catalog Number:
Launch Date: Febrauary 13, 2012
Launch Site: Kourou, French Guiana

Status: On Orbit

Uplink:
Downlink: 437.325 MHz 1k2 FM telemetry (data every 1 min, 20 sec. burst)

Beacon:

Callsign:

URL:

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum2
[02142012]
��MO-72 MaSat-1
Catalog Number: 38081
Launch Date: Febrauary 13, 2012
Launch Site: Kourou, French Guiana

Status: Operational

Uplink:
Downlink: 437.345 MHz GFSK 625/1250 bps
437.345 MHz CW

Beacon:

Callsign:

URL:

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum6
[03232012]
��Goliat
Catalog Number: 38085
Launch Date: Febrauary 13, 2012
Launch Site: Kourou, French Guiana

Status: Operational

Uplink:
Downlink: 437.485 MHz 1k2 AFSK

Beacon:

Callsign:

URL:

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum&#65533;
[03162012]
&#65533;&#65533;E-Star
Catalog Number: 38079
Launch Date: Febrauary 13, 2012
Launch Site: Kourou, French Guiana

Status: On Orbit

Uplink:
Downlink: 437.445 MHz 1k2 bps AFSK

Beacon:

Callsign:

URL:

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum0
[03232012]
&#65533;&#65533;ALMASat1
Catalog Number: 38078
Launch Date: Febrauary 13, 2012
Launch Site: Kourou, French Guiana

Status: On Orbit

Uplink:
Downlink: 437.465 MHz 1k2 bps FSK
2407.850 MHz

Beacon:

Callsign:

URL:

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum9
[02212012]
&#65533;&#65533;RS-39 Chibis-M
Catalog Number: 37841
Launch Date: October 30, 2011 10:11:00 UTC
Launch site: Tyuratam (Baikonur Cosmodrome), Kazakhstan

Status: Operational

Uplink:
Downlink:

Beacon: 435.315 MHz CW
435.215 MHz CW

Callsign:

URL:

IARU coordination status page:
[01122012]
��JUNGU
Catalog Number: 37841
Launch Date: October 12, 2011 05:30:00 UTC
Launch site: Satish Dhawan Space Centre, India

Status: On Orbit

Uplink: 145.??? MHz 1k2 (mode?)
Downlink: 437.505 MHz 9k6 (mode?)

Beacon: 437.275 MHz 15 wpm (?) CW

Callsign:

URL: http://www.iitk.ac.in/me/jugnu/index.htm

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum0
[01122012]
��SRMSAT
Catalog Number: 37839
Launch Date: October 12, 2011 05:30:00 UTC
Launch site: Satish Dhawan Space Centre, India

Status: On Orbit

Uplink: 145.900 MHz 1k AX.25 (speed?)
Downlink: 437.500 MHz 2k4 AX.25

Beacon: 437.425 MHz 12 wpm CW

Callsign:

URL: http://srmsat.in/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum1
[01122012]
��HRBE (E1P Explorer 1 [Prime] CubeSat (E1P-U2))
Catalog Number: 37855
Launch Date: October 28, 2011
Launch site: Vandenberg Air Force Base, California, USA

Status: On Orbit

Uplink: 437.305 MHz (???)
Downlink: 437.505 MHz AX.25 (SSB?)

Beacon:

Callsign:

URL: http://ssel.montana.edu/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum6
[01122012]
��M-Cubed
Catalog Number: 37855
Launch Date: October 28, 2011
Launch site: Vandenberg Air Force Base, California, USA

Status: On Orbit

Uplink:
Downlink: 437.485 MHz AX.25

Beacon:

Callsign:

URL: http://umcubed.org/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum!5
[01122012]
��RAX-2
Catalog Number: 37853
Launch Date: October 28, 2011
Launch site: Vandenberg Air Force Base, California, USA

Status: Operational

Uplink:
Downlink: 437.345MHz 9k6 GMSK

Beacon:

Callsign:

URL: http://rax.engin.umich.edu//

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum"1
[03232012]
��AO-71 AubieSat-1
Catalog Number: 37854
Launch Date: October 28, 2011
Launch site: Vandenberg Air Force Base, California, USA

Status: On Orbit

Uplink:
Downlink: 437.475 MHz 1k2 AX.25

Beacon: 437.475 MHz CW

Callsign: KI4NQO

URL: http://www.space.auburn.edu/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum8
[12262011]
��O/OREOS
Catalog Number: 37224
Launch Date: November 20, 2010
Launch site: Kodiak Launch Complex, Alaska, USA

Status: On Orbit

Uplink:
Downlink: 437.035 MHZ AX.25

Beacon:

Callsign:

URL: http://www.ooreos.org/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum6
[02092011]
��Rax-1 Radio Aurora Explorer
Catalog Number: 37223
Launch Date: November 20, 2010
Launch site: Kodiak Launch Complex, Alaska, USA

Status: On Orbit

Uplink:
Downlink: 437.505 MHz 9k6 GMSK

Beacon:

Callsign: RAX-1

URL: http://rax.engin.umich.edu/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum5
[02092011]
��FO-69 Fastrac-1 Sara Lily
Catalog Number: 37227
Launch Date: November 20, 2010
Launch site: Kodiak Launch Complex, Alaska, USA

Status: Operational

Uplink 1: 145.980 MHz 1k2 baud
Uplink 2: 145.825 MHz 1k2 baud
Downlink: 437.345 MHz 1k2 and 9k6 baud

Beacon: 437.435 MHz 1k2 AX.25

Callsign: Fast1

URL: http://fastrac.ae.utexas.edu/index.php

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=
[07052011]
==FO-70 Fastrac-2 Emma
Catalog Number: 37380
Launch Date: November 20, 2010
Launch site: Kodiak Launch Complex, Alaska, USA

Status: Operational

Uplink 1: 435.025 MHz 1k2 baud
Uplink 2: 437.435 MHz 9k6 baud
Downlink: 145.825 MHz 1k2 and 9k6 baud

Beacon: 145.825 MHz 1k2 AX.25

Callsign: Fast2

URL: http://fastrac.ae.utexas.edu/index.php

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=
[12162011]
==StudSat
Catalog Number: 36796
Launch Date: July 12, 2010 0352z
Launch site: Satish Dhawan Space Centre, India

Status: On Orbit

Uplink: 437.505MHz, 9600bps FSK
Downlink: 437.505MHz, 9600bps FSK
Beacon : 437.505MHz, 20bps ASK

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum4
[02092011]
==TIsat-1
Catalog Number: 36799
Launch Date: July 12, 2010 0352z
Launch site: Satish Dhawan Space Centre, India

Status: On orbit

Callsign: HB9DE

Uplink: 145.980MHz FM, AFSK
Downlink: 437.305MHz FM, AFSK
Beacon: 437.305MHz CW

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum8
[02092011]
��SwissCube
Catalog Number: 35932
Launch Date: September 23, 2009 0621z
Launch site: Satish Dhawan Space Centre, India

Status: Operational

Callsign: HB9EG

Beacon(100mw): 437.5050MHz CW
Beacon(1w): 437.5050MHz FSK 1k2bps

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum9
[02092011]
��UWE-2
Catalog Number: 35934
Launch Date: September 23, 2009 0621z
Launch site: Satish Dhawan Space Centre, India

Status: In Orbit

Beacon(500mw): 437.3850 MHz AFSK 1k2bps
437.3850 MHz FSK 9k6bps

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum0
[02092011]
��ITUpsAT1
Catalog Number: 35935
Launch Date: September 23, 2009 0621z
Launch site: Satish Dhawan Space Centre, India

Status: Operational

Beacon(100mw): 437.325MHz CW
Beacon(1w): 437.325MHz 19k2bps

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum3
[02092011]
��BEESAT
Catalog Number: 35933
Launch Date: September 23, 2009 0621z
Launch site: Satish Dhawan Space Centre, India

Status: Operational

Callsign: DP0BEE

Beacon(100mw): 436.000MHz CW
Beacon(500mw): 436.000MHz GMSK 4k8bps
Beacon(500mw): 436.000MHz GMSK 9k6bp
[02092011]
��CP-6
Catalog Number: 35004
Launch Date: May 19, 2009 2355z
Launch site: Wallops Island, Virginia, USA

Status: Operational

Downlink: 437.365 MHz 1k2 AFSK

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum1
[01122012]
��HAWKSAT 1
Catalog number: 35003
Launch Date: May 19, 2009 2355z
Launch site: Wallops Island, Virginia, USA

Status: operational

Downlink: 437.345 MHz ?

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum5
[01122012]
��Pharmasat
Catalog Number: 35002
Launch Date: May 19, 2009 2355z
Launch site: Wallops Island, Virginia, USA

Status: Operational

Downlink: 437.465 MHz 1k2 AFSK

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum�
[02092011]
��ANUSAT
Catalog Number: 34808
Launch Date: April 20, 2009 0115z
Launch Site: Satish Dhawan Space Centre, India

Status: ?

Downlink: 435.000 MHz
Uplink: 145.800 MHz

Telemetry: 137.400 MHz
[02092011]
��SOHLA-1 (ASTRO TECH.)

Catalog Number: 33496
Launch Date: January 23, 2009 0354z
Launch site: Tanegashima Space Center, Japan

Status: Operational

Proposed Frequencies and Modes:
Downlink: 437.505 MHz AFSK/CW
Beacon: 437.505 MHz AFSK/CW

Callsign:

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum1
[02092011]
��KAGAYAKI (Solan Co.)
Catalog Number: 33495
Launch Date: January 23, 2009 0354z
Launch site: Tanegashima Space Center, Japan

Status: In Orbit

Downlink: 437.375 MHZ FSK9k6/CW
Beacon: 437.375 MHz FSK9k6/CW

IARU coordination status page:

AMSAT-NA webpage:

[02092011]
��STARS (Kagawa Univ.) (Twin Satellites)
Catalog Number: 33498
Launch Date: January 23, 2009 0354z
Launch site: Tanegashima Space Center, Japan

Status: Operational ?

Downlinks: 437.485 MHz FM/CW
437.465 MHz FM/CW
Beacons: 437.305 MHz FM/CW
437.275 MHz FM/CW

Callsigns: JR5YBN
JR5YBO

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum�

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID1&retURL
�atellites/status.php
[02092011]
��KKS-1 (Tokyo MCIT)
Catalog Number: 33499

Launch Date: January 23, 2009 0354z
Launch site: Tanegashima Space Center, Japan

Status: Operational

Downlink: 437.455 MHz AFSK/CW
Beacon: 437.385 MHz AFSK/CW

Callsign: JQ1YYY

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum7

AMSAT-NA webapge:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID0&retURL
�atellites/status.php
[20092011]
��PRISM (Tokyo Univ.)
Catalog Number: 33493
Launch Date: January 23, 2009 0354z
Launch site: Tanegashima Space Center, Japan

Status: Operational ?

Downlink: 437.425 MHz AFSK/GMSK/CW
Beacon: 437.250 MHz AFSK/GMSK/CW

Callsign: JQ1YCX

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum�

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID9&retURL
�atellites/status.php
[02092011]
��RS-30 Radio Sputnik 30 (Yubileiny)
Catalog Number: 32953
Launch Date: May 23, 2008 1520z
Launch site: Plesetsk Missile and Space Complex, Russia

Status: Operational

Curent Modes: Telemetry
Audio
Images

Downlinks: 435.315 MHz
435.215 MHz

AMSAT-NA website:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID5&ret
URL�atellites/status.php

Official website:
http://www.npopm.com/?cid&#65533;oca&caidC
[02092011]
&#65533;&#65533;CanX-2
Catalog number: 32790
Launch Date: April 28, 2008 0354z
Launch site: Satish Dhawan Space Centre, India

Status: Operational in range of ground station only

Downlink: 437.478 MHz GFSK

For the latest project status update please visit the Can X-2 web
page: http://www.utias-sfl.net/nanosatellites/CanX2/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnumF
[02092011]
&#65533;&#65533;AAUSAT-II
Catalog number: 32788
Launch Date: April 28, 2008 0354z
Launch site: Satish Dhawan Space Centre, India

Status: Operational

Downlink: 437.425 MHz 1k2 baud packet

For the latest project status update please visit the AAUSAT-II web
page:
http://www.aausatii.aau.dk/homepage/index.php?language&#65533;&page&#65533;me

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum`
[02092011]
&#65533;&#65533;CO-65 CUTE-1.7+APD II
Catalog number: 32785
Launch Date: April 28, 2008 0354z
Launch site: Satish Dhawan Space Centre, India

Status: Operational

Downlink: 437.475 MHz 9k6 Packet
Uplink: 1267.600 Mhz

Telemetry Beacon:
Downlink: 437.2750 MHz CW

For the latest project status update please visit the Cute-1.7+APD II
web page: http://lss.mes.titech.ac.jp/ssp/cute1.7/index_e.html

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnumx

Command Station blog website:
http://lss.mes.titech.ac.jp/ssp/cute1.7/blog/

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID2&retURL
=atellites/status.php
[03232012]
==Compass-1
Catalog number: 32787
Launch Date: April 28, 2008 0354z
Launch site: Satish Dhawan Space Centre, India

Status: Operational

Current Mode: dependant on last received command

Uplink: 145.980 MHz FM
Downlink: 437.275 Mhz CW
437.405 MHz Packet

For the latest project status update please visit the Compass 1 web
page: http://www.raumfahrt.fh-aachen.de/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnumR

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID4&retURL
=atellites/status.php
[06162011]
==CO-66 Seeds II
Catalog number:
Launch Date: April 28, 2008 0354z
Launch site: Satish Dhawan Space Centre, India

Status: Operational

Downlink: 437.485 MHz

Callsign: JQ1YGU

For the latest project status update please visit the Seeds 2 web
page: http://cubesat.aero.cst.nihon-u.ac.jp/english/seeds_2_e.html

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum6

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID3&retURL
=atellites/status.php
[02092011]
==CAPE-1
Catalog Number: 31130
Launch Date: April 17,2007 0702z
Launch site: Baikonur, Kazakhstan

Status: Intermittent

Current Mode: /u

TLM Downlink: 435.245 MHz 9600 bs FSK AX.25
CW Beacon: 435.245 MHz CW

Callsign: K5USL

TLM and CW interchange every 30 seconds.

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID&#65533;&retURL
/satellites/status.php

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnumr
[02092011]
&#65533;&#65533;CP3
Catalog Number: 31129
Launch Date: April 17,2007 0702z
Launch site: Baikonur, Kazakhstan

Status: Operational

Current Mode: /u

Downlink: 436.845 MHz 1200 bps AFSK AX.25

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnumt
[02092011]
&#65533;&#65533;CO-58 CubeSat XI-V
Catalog number: 28895
Launch Date: October 27, 2005 0652z
Launch site: Plesetsk Missile and Space Complex, Russia

Status: Operational - CW Beacon only

Current Mode: /u

Telemetry Downlink: 437.4250 MHz AFSK 1200bps using AFK protocol
Beacon: 437.2750 MHz CW

Callsign: JQ1YGW

Official Webpage: http://www.space.t.u-tokyo.ac.jp/cubesat/mission/V/

Pictures received by Mineo Wakita - JE9PEL:
http://www.ne.jp/asahi/hamradio/je9pel/xivpicte.htm

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum7
[02092011]
&#65533;&#65533;CO-57 CubeSat XI-IV
Catalog number: 27848
Launch date: June 30, 2003 1415z
Launch site: Plesetsk Missile and Space Complex, Russia

Status: ?????

Current Mode: /u

Beacon: 436.8475 MHz CW
Telemetry : 437.4900 MHz AFSK 1200 BPS

Callsign: JQ1YGW

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID&#65533;&retURL
&#65533;atellites/status.php

Official Webpage: http://www.space.t.u-tokyo.ac.jp/cubesat/mission/V/
[02092011]
&#65533;&#65533;QuakeSat
Catalog Number: 27845
Launch Date: June 30, 2003 1415z
Launch site: Plesetsk Missile and Space Complex, Russia

Status: Telemetry only

Current Mode: 9600 baud data packet

Mode U packet
Downlink: 436.675 MHz 9k6 BPS

Quakesat webpage:
http://www.quakefinder.com/services/quakesat-ssite/
[02252011]
&#65533;&#65533;CO-55 Cute-1.7+APD II
Catalog Number: 27844
Launch date: June 30, 2003 1415z
Launch site: Plesetsk Missile and Space Complex, Russia

Status: Operational

Current Mode: CW downlink worldwide
AX25 Packet with uplink command over Japan only

Mode U Telemetry
Downlink: 437.4000 MHz AFSK 1200 BPS

Mode U TLM Beacon
Downlink: 436.8375 MHz CW

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satIDi&retURL
&#65533;atellites/status.php

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnumx
[02092011]
&#65533;&#65533;NO-44 PCSAT
Catalog number: 26931

Launch Date: September 30, 2001 0240z
Launch site: Kodiak Launch Complex, Alaska, USA

Status: Telemetry only

Current Mode: V/v

General Usage Uplink/Downlink: 145.827 MHz 1200 Baud
Special Usage Downlink: 144.390 Mhz 1200 Baud

PCSAT APRS page: http://pcsat.aprs.org

aprstlm Telemetry Decoder program:
http://www.xciv.org/~iain/aprstlm/v1.2/
[02092011]
��RS-22 RADIO SPORT 22 (MOZHAYETS 4)
Catalog number: 27939
Launch Date: September 27, 2003 0612z
Launch site: Plesetsk Missile and Space Complex, Russia

Status: Operational - 70cm cw only

Current Mode: /u

CW Beacon - 435.352 MHz
145.818 MHz

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satIDv&retURL
�atellites/status.php
[02092011]
��LO-19 LUSAT
Catalog number: 20442
Launch date: January 22, 1990
Launch site: Kourou, French Guiana

Status: CW Beacon only

Uplinks: 145.840 MHz 1200-baud Manchester FSK
145.860 MHz 1200-baud Manchester FSK
145.880 MHz 1200-baud Manchester FSK
145.900 MHz 1200-baud Manchester FSK

CW downlink: 437.125 MHz

Digital downlink: 437.150 MHz SSB (RC-BPSK 1200-baud PSK)

Broadcast Callsign: LUSAT-11
BBS: LUSAT-12

General information and telemetry samples can be found at:
www.telecable.es/personales/ea1bcu
[02092011]
��UO-11 OSCAR-11

Catalog number: 14781
Launch Date: March 1, 1984
Launch site: Vandenburg AFB, California, USA

Status: Operational ?

Current Mode: /v

Telemetry Downlink: 145.825 MHz FM 1200 AFSK
UHFBeacon: 435.025 MHz
Mode-S Beacon: 2401.500 MHz

Mode and Antenna Polarization:
V: RHCP
S: LHCP

Webpage: http://www.users.zetnet.co.uk/clivew/
MPEG3 files: http://www.ne.jp/asahi/hamradio/je9pel/uo11tlme.htm
[07052011]
��INTERNATIONAL SPACE STATION (ISS) - ARISS
Catalog number: 25544
Launch date: November 20, 1998 0640z (ZARYA module)
Launch sites: Baikonur, Kazakhstan
Kourou, French Guiana
Uchinoura Space Center, Japan
Kennedy Space Center, Titusville, Florida, USA

Status: Operational

Current Active Modes: FM Repeater - OFF
Voice - V/v
BBS - OFF
2m APRS - ON
70cm Digi - ON
SSTV - OFF

Expedition 31 Crew (April 2012 - July 2012):
Commander: Oleg Kononenko RN3DX
Flight Engineer: Andr&#xf; Kuipers PI9ISS
Flight Engineer: Don Pettit KD5MDT
Flight Engineer: Joe Acaba KE5DAR
Flight Engineer: Gennady Padalka RN3DT
Flight Engineer: Sergei Revin RN3BS

Available Modes and Frequencies:
Digital/APRS:
Worldwide 2m packet uplink: 145.825 MHz FM 1k2
Worldwide 2m packet downlink: 145.825 Mhz FM 1k2
Worldwide 70cm packet downlink: 437.550 Mhz FM 1k2
Worldwide 70cm packet downlink: 437.550 Mhz FM 1k2

Voice:
Region 1 voice uplink: 145.200 MHz FM

Region 2/3 voice uplink: 144.490 MHz FM
Worldwide downlink: 145.800 MHz FM

Crossband Repeater:
Repeater Uplinks: 1269.650 MHz FM
437.800 MHz FM
145.990 MHz FM - 67.0 PL (Kenwood)
Repeater Downlink: 145.800 MHz FM
437.800 MHz FM (Kenwood)

SSTV Robot 36:
Downlink: 145.800 MHz FM

Mode and Antenna Polarization:
V: Linear
U: Linear

Callsigns:
Belgian: OR4ISS
German: DP0ISS
Russian: RS0ISS
RZ3DZR
United States: NA1SS
2m Packet Mailbox: RS0ISS-11
2m Digipeater alias: ARISS
70cm Packet Mailbox: RS0ISS-1
70cm Digipeater callsign: RS0ISS
70cm Digipeater alias: ARISS

Official ARISS Webpage: http://www.rac.ca/ariss
ISS Fan Club Webpage: http://www.issfanclub.com
APRS tracking page: http://www.ariss.net/

ISS Daily Crew Schedule: http://spaceflight.nasa.gov/station/timelines
Remember that the crew operates on UTC time. Also, all of the time
line is NOT translated from Russian and posted.
[05152012]
NNNN
/EX

SB SAT @ AMSAT W8ISS $WSR-142.S3
WSR 142 Part 3 05/21/2012

AMSAT NEWS SERVICE BULLETIN 142.S3
FROM AMSAT HQ SILVER SPRING, MD, May 21, 2012
TO ALL RADIO AMATEURS
BID: $WSR-142.S3

THE FOLLOWING ARE IN ORBIT BUT ARE NON-OPERATIONAL AT THIS TIME:

NANOSAIL-D
Catalog Number: 37361(?)
Ejection Date: January 17, 2011

Status: Non - Operational

Downlink: 437.270 MHz AX.25

URL: http://nanosaild.engr.scu.edu/dashboard.htm

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum5
[04302012]
��HO-68 HOPE-1 (CAS-1)(XW-1)
Catalog Number: 36122
Launch Date: December 15, 2009 0231z
Launch site: Taiyuan Space Center, PRC

Status: Telemetry only

Callsign:
Broadcast: BJ1SA-11
BBS: BJ1SA-12

Uplinks: 145.8250 MHz FM, PL 67.0 Hz.
145.9250 - 145.9750 MHz SSB/CW
145.8250 MHz AFSK 1200 BPS
Downlinks: 435.6750 MHz FM
435.7650 - 435.7150 MHz SSB/CW
435.6750 MHz AFSK 1200 BPS

Beacon: 435.7900 MHz CW

Mode and Antenna Polarization:
V: LHCP 2.0dBi max
U: RHCP 3.0dBi max

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum8

For more information about XW-1 (CAS-1):
http://
[04302012]
��SO-67 SumbandilaSat
Catalog Number: 35870
Launch Date: September 17, 2009 1555z
Launch site: Baikonur, Kazakhstan

Status: Non - Operational

Callsign: ZS0SUM

Uplink: 145.875MHz FM tone 233.6 Hz
Downlink: 435.345MHz FM

Mode and Antenna Polarization:
V: Linear
U: Linear

For more information about SO-67:
http://www.amsatsa.org.za/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum&#65533;
[01272012]
&#65533;&#65533;CP4
Catalog Number: 31132
Launch Date: April 17, 2007

Status: Non-Operational

Current Mode: /u

TLM Downlink: 437.325 MHz 1200 bps FSK AX.25
CW Beacon: 437.325 MHz CW

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnumy
[09062010]
&#65533;&#65533;LIBERTAD-1
Catalog Number: 31128
Launch Date: April 17, 2007

Status: Non-Operational

Current Mode: V/u APRS Packet ax25

Callsign: 5K3L

Uplink: 145.825 MHz 1200 AFSK ax25 APRS
Downlink: 437.399 MHz 1200 AFSK ax25 APRS

Telemetry Beacon: 437.4050 MHz 1200 AFSK ax25

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnumv
[09062010]
&#65533;&#65533;PO-63 PEHUENSAT-1
Catalog Number: 29712
Launch Date: January 10, 2007

Status: Non-Operational

Current Mode: V/v

Uplink/Downlink: 145.825 Mhz FM
Voice Recorder: 145.825 Mhz FM

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnumQ
[09062010]
&#65533;&#65533;NCUBE-2
Catalog number: 28897
Launch Date: October 27, 2005

Status: Still attached to XO-53 (SSETI)?

Proposed Callsign: TBA
Proposed Transmit Frequency: 437.305
2407.250

Official Website: http://www.ncube.no

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum$
[09062010]
��XO-53 SSETI
Catalog number: 28894
Launch Date: October 27, 2005

Status: Non-operational

Voice Uplink: 437.250 MHz FM 67Hz CTCSS
Voice Downlink: 2401.835 MHz FM
Packet Up/Downlink: 437.250 MHz 9k6 packet
Packet Downlink 2401.835 MHz 38k4 packet

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnumT
[09062010]
��UWE-1
Catalog Number: 28892
Launch Date: October 27, 2005

Status: Non-Operational

Mode U Telemetry
Downlink: 437.5050 MHz 9600 AFSK

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnumS
[09062010]
��AO-51 ECHO
Catalog number: 28375
Launch date: June 29, 2004 0745z
Launch site: Baikonur, Kazakhstan

Status: Non - Operational

Current Mode(s):
Voice repeater: V/u
Uplink: 145.880 MHz FM
Downlink: 435.150 MHz FM

Telemetry: Recovery efforts
Downlink: 435.150MHz 9k6

Analog voice downlink: 435.300 MHz FM
435.150 MHz FM
2401.200 Mhz FM

Analog voice uplink: 145.860 MHZ FM
145.880 MHz USB
145.880 MHz FM
145.920 MHz FM
145.920 MHz FM - 67 Hz PL tone burst
1268.705 MHz FM
Digital Downlinks: 435.150 MHz FM 38k4 PBP, 1 watt output
435.150 MHz FM 9k6 Pacsat Broadcast Protocol
2401.200 MHz FM 38k4 bps, AX.25
Digital Uplink: 145.860 MHz FM 9k6 Pacsat Broadcast Protocol
1268.703 mhz FM 9k6 Pacsat Broadcast Protocol
Beacon: 435.150 MHz

Mode and Antenna Polarization:
T: Linear
V: Linear
U: TX A (usually digital)LHCP
TX B (usually analog) RHCP
L: Linear
S: Linear

Broadcast: PECHO-11
BBS: PECHO-12

Official Webpage: http://www.amsat.org/amsat-new/echo/CTNews.php

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum
[12062011]
��CANX-1
Catalog Number: 27847
Launch Date: June 30, 2003

Status: Non-Operational

Downlink: 437.8800 MHz AFSK 1k2bps
[06052009]
��DTUSAT
Catalog Number: 27842
Launch Date: June 30, 2003

Status: Non-Operational

Current Mode: 2k4 AFSK Packet last reported

Downlink: 437.475MHz

Officail webpage: http://dtusat1.dtusat.dtu.dk/

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID1&retURL
�tellites/all_oscars.php
[02212009]

��AO-49 AATiS OSCAR-49 (SAFIR-M)
Catalog number: 27605
Launch Date: December 20, 2002

Status: Non-operational.

Uplink: 435.275 MHz 1200-baud AFSK
Downlink: 145.825 MHz 9600-baud FSK
(optional voice message)

Broadcast callsign: DP0AIS

Official webpage: http://amend.gmxhome.de
[01222007]
��MO-46 TIUNGSAT-1
Catalog number: 26548
Launch date: September 26, 2000

Status: Telemetry only

Uplinks: 145.850 MHz
145.925 MHz 9600-baud FSK
Downlink: 437.325 MHz

Broadcast callsign: MYSAT3-11
BBS: MYSAT3-12

TiungSat-1 is Malaysia's first micro-satellite and in addition to
commercial land and weather imaging payloads offers FM and FSK
Amateur Radio communication.

TiungSat-1, named after the mynah bird of Malaysia, was developed as
a collaborative effort between the Malaysian government and Surrey
Satellite Technology Ltd.
[03302009]
��NO-45 SAPPHIRE
Catalog number: 26932
Launch Date: September 30, 2001

Status: Non-Operational

Downlink: 437.095 MHz 1200 baud AX-25 AFSK
Uplink: 145.945 MHz UI Digipeater
Digi Callsign: KE6QMD

Everyone is welcome to use the digipeating/APRS features of Sapphire,
as per the user service agreement located at the following URL:
http://web.usna.navy.mil/~bruninga/pcsat/contract.txt
[03132005]
��SO-42 SAUDISAT-1B
Catalog number: 26549
Launch date: September 26, 2000

Status: Non-Operational

Downlink: 437.075 MHz

Broadcast Callsign: SASAT2-11
BBS: SASAT2-12

Further information is available at:
http://www.amsat.org/amsat/sats/n7hpr/so42.html
[01222007]
��SO-41 SAUDISAT-1A
Catalog number: 26545
Launch Date: September 26, 2000

Status: Non-Operational

Uplink: 145.850 MHz
Downlink: 436.775 MHz

Broadcast Callsign: SASAT1-11
BBS: SASAT1-12

Further information is available at:
http://www.amsat.org/amsat/sats/n7hpr/so41.html
[01222007]
��AO-40 AMSAT OSCAR 40
Catalog number: 26609
Launch Date: November 16, 2000

Status: Non-Operational

Uplinks

V-band: 145.840 - 145.990 MHz CW/LSB
U-band: 435.550 - 435.800 MHz CW/LSB
L1-band: 1269.250 - 1269.500 MHz CW/LSB
L2-band: 1268.325 - 1268.575 MHz CW/LSB

Downlinks

S2-band: 2401.225 - 2401.475 MHz CW/USB
K-band: 24048.010 - 24048.060 MHz CW/USB
Beacon: 2401.323 MHz
24048.035 MHz

P3-D Telemetry Beacons (IHU)

BEACON General Beacon(GB) Middle Beacon(MB) Engineering Beacon(EB)
2 m none 145.898 MHz none
70cm 435.438 MHz 435.588 MHz 435.838 MHz
13cm(1) 2400.188 MHz 2400.338 MHz 2400.588 MHz
13cm(2) 2401.173 MHz 2401.323 MHz 2401.573 MHz
3cm 10450.975 MHz 10451.125 MHz 10451.375 MHz
1.5cm 24047.885 MHz 24048.035 MHz 24048.285 MHz
[07162007]
��OO-38 OPAL

Catalog Number: 26063
Launch Date: January 27, 2000

Status: Non-Operational

Mode U TLM Beacon
Downlink: 437.1000 MHz 9600 FSK
[08132007]
��UO-36 UoSAT-12
Catalog number: 25693
Launch date: April 21, 1999

Status: Unknown

Uplink: 145.960 MHz (9600-baud FSK)
Downlinks: 437.025 MHz
437.400 MHz

Broadcast Callsign: UO121-11
BBS: UO121-12

The VK5HI viewer shareware for UO-36 is available on the AMSAT-NA web
site at the following URL:
ftp://ftp.amsat.org/amsat/software/win32/display/ccddsp97-119.zip
[01222007]
��SO-35 SUNSAT
Catalog Number: 25636
Launch date:February 23, 1999

Status: Non-Operational

Downlink: Mode B Repeater: 436.291 MHz
Mode J Digipeater: 436.250 MHz

Uplinks: Mode B Repeater: 145.825 MHz
Mode J Digipeater: 145.825 MHz
145.900 MHz

For more information of SUNSAT vist the satellite web site:
http://esl.ee.sun.ac.za/projects/sunsat/
[01222007]
��PO-34 PANSAT
Catalog number: 25520
Launch date: October 30, 1998

Status: Telemetry downloads only

Uplink/downlink: 436.500 MHz

Official Webpage: http://www.sp.nps.navy.mil/pansat/
[05092004]
��SO-33 SEDSAT-1
Catalog number: 25509
Launch date: October 24, 1998

Status: Semi-operational

Downlink: 437.910 MHz FM (9600-baud FSK)

The satellite is not currently available for uplink transmissions and
the image and transponder recovery efforts have been unsuccessful.

For more information on SedSat-1 visit the satellite web site:
http://seds.uah.edu/projects/sedsat/sedsat.htm
[09042006]
��GO-32 Gurwin TechSat-1B
Catalog number: 25397
Launch Date: July 10, 1998

Status: Non-Operational

Current Modes:
Telemetry : /u

Downlink: 435.225 MHz FM (9600-baud FSK)
435.325 Mhz - Not Available - temperature problems
Uplinks: 145.850 FM
145.890 FM
145.930 FM
1269.700 FM
1269.800 FM
1269.900 FM

Broadcast Callsign: 4XTECH-11
BBS Callsign: 4XTECH-12

More information of GO-32 can be found at:
http://asri.technion.ac.il/techsat/

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID&retURL
�atellites/status.php
[07172010]
��TO-31 TMSAT-1
Catalog number: 25396
Launch Date: July 10, 1998

Status: Non-operational

Uplink: 145.925 MHz 9600 baud FSK
Downlink: 436.925 MHz 9600 baud FSK

Broadcast callsign: TMSAT1-11
BBS: TMSAT1-12
[05012006]
��MO-30 UNAMSAT-2
Catalog Number: 24305
Launch Date: September 5, 1996

Status: Non-operational

Downlink: 435.1380 MHz AFSK 1200 BPS
Downlink: 435.2060 MHz AFSK 1200 BPS
Uplink: 145.8150 MHz AFSK 1200 BPS
Uplink: 145.8350 MHz AFSK 1200 BPS
Uplink: 145.8550 MHz AFSK 1200 BPS
Uplink: 145.8750 MHz AFSK 1200 BPS
[06042009]
��PO-28 POSAT-1
Catalog number: 22829
Launch Date: September 25, 1993

Status: Non-operational

Downlink: 429.950
Uplink: Not until handover back to Amatuer usage

Broadcast callsign: POSAT1-11
BBS callsign: POSAT1-12

AMSAT Webpage: http://www.amsat.org/amsat/sats/n7hpr/po28.html
POSAT-1 webpage:
http://www.ee.surrey.ac.uk/SSC/CSER/UOSAT/missions/posat1.html
[01012009]
��IO-26 ITAMSAT
Catalog number: 22826
Launch Date: September 26, 1993

Status: PSK carrier only

Current Mode:

Uplinks: 145.875 MHz FM 1200-baud
145.900 MHz FM 1200-baud
145.925 MHz FM 1200-baud
145.950 MHz FM 1200-baud

Downlink: 435.808 MHz PSK

Broadcast Callsign: ITMSAT-11
BBS: ITMSAT-12

Official webpage: http://www.itamsat.org
AMSAT Webpage: http://www.amsat.org/amsat/sats/n7hpr/io26.html
[01212007]
��KO-25 KITSAT
Catalog number: 22828
Launch date: September 26, 1993

Status: Non-operational

Uplink: 145.980 MHz FM 9600-baud FSK
Downlink: 436.500 MHz FM

Broadcast Callsign: HL02-11
BBS: HL02-12

[05092004]
��AO-24 ARSENE
Catalog Number: 22654
Launch Date: May 13, 1993

Status: Non-operational

Uplink: 435.0625 MHz FM 1k2bps AFSK
435.1125 MHz FM 1k2bps AFSK
435.1375 MHz FM 1k2bps AFSK
Downlink: 145.9750 MHz FM 1k2bps AFSK
2446.5025 MHz FM 1k2bps AFSK

Beacon: 2446.4700 MHz CW

Broadcast callsign:
BBS:
[12162009]
��KO-23 KITSAT
Catalog number: 22077
Launch date: August 10, 1992

Status: Non-operational

Uplink: 145.900 MHz FM (9600-baud FSK)
Downlink: 435.170 MHz FM

Broadcast Callsign: HLO1-11
BBS: HLO1-12
[01222007]
��UO-22 UOSAT
Catalog number: 21575
Launch date: July 17, 1991

Status: Non-Operational

Uplink: 145.900 FM 9600-baud FSK
Downlink: 435.120 MHz FM

Broadcast Callsign: UOSAT5-11
BBS: UOSAT5-12
[01222007]
��AO-21 AMSAT-OSCAR 21
Catalog Number: 21087
Launch Date: January 29, 1991

Status: Non-Operational

Uplink: 435.041 MHz FM DSP
Downlink: 145.983 MHz FM DSP
[01222007]
��FO-20 JAS-1b
Catalog number: 20480

Launch Date: February 07, 1990

Status: Non-Operational

Beacons: 435.795 MHz CW
435.910 MHz AX25

Voice Transponder:
Uplink: 145.900 to 146.000 MHz CW/LSB
Downlink: 435.800 to 435.900 MHz CW/USB

Digital Transponder:
Uplinks: 145.850 MHz
145.870 MHz
145.890 MHz
145.910 MHz
Downlink: 435.910 MHz

More FO-20 info can be found at:
http://www.amsat.org/amsat/sats/n7hpr/fo20.html
[01152007]
��WO-18 WEBERSAT
Catalog Number: 20441
Launch Date: January 22, 1990

Status: Non-Operational

Downlink: 437.104 MHz SSB 1200 Baud PSK AX.25
[05012006]
��DO-17 Dove
Catalog Number: 20440
Launch Date: January 22, 1990

Status: Non-operational.

Downlink: 145.825 MHz FM 1200 Baud AFSK
Beacon: 2401.220 MHz
[05012006]
��AO-16 PACSAT
Catalog number: 20439
Launch Date: January 22, 1990

Status: non-operational

Current Mode: V/u

Uplink: 145.900 MHz FM 1200-baud Manchester FSK (reserved)
145.920 MHz FM VOICE
145.940 MHz FM 1200-baud Manchester FSK (reserved)
145.960 MHz FM 1200-baud Manchester FSK (reserved)

Downlink: 437.026 MHz USB VOICE
(1200-baud PSK - MBL Telemetry Only)

Mode-S Beacon: 2401.1428 MHz [NO FUTURE OPERATIONS PLANNED]

Mode and Antenna Polarization:
U: RC 437.050 MHz RHCP
PSK 437.026 MHz LHCP
V: Linear

Broadcast Callsign: PACSAT-11
BBS: PACSAT-12

AO-16 AMSAT Webpage: http://www.amsat.org/amsat/sats/n7hpr/ao16.html
[07242009]
��UO-15 UoSAT-4
Catalog Number: 20438
Launch Date: January 22, 1990

Status: Non-operational

Uplink: ?
Downlink: 435.1250MHz (?)
435.1200MHz (?)
[06042009]
��UO-14 UoSAT-3
Catalog number: 20437
Launch date: January 22, 1990

Status: Non-operational

Uplink: 145.975 MHz FM
Downlink: 435.070 MHz FM
[05092004]
��FO-12 Fuji-OSCAR 12
Catalog Number: 16909
Launch Date: August 12, 1986

Status: Non-Operational

Mode V/U (J) Linear Transponder (Inverting):
Uplink: 145.9000 - 146.0000 MHz SSB/CW
Downlink 435.8000 - 435.9000 MHz SSB/CW

Mode V/U (J) Packet:
Uplink: 145.8500 MHz MFSK 1200 BPS
Uplink: 145.8700 MHz MFSK 1200 BPS
Uplink: 145.8900 MHz MFSK 1200 BPS
Uplink: 145.9100 MHz MFSK 1200 BPS

Downlink 435.9100 MHz PSK 1200 BPS

Telemetry Beacon: 435.7950 MHz SSB/CW
[01152007]
��AO-10 OSCAR 10
Catalog number: 14129
Launch Date: June 16, 1983

Status: Non-operational

Uplink: 435.030 to 435.180 MHz CW/LSB
Downlink: 145.975 to 145.825 MHz CW/USB

Beacon: 145.810 MHz (unmodulated carrier)

W4SM has more information about the satellite at the following URL:
http://www.cstone.net/~w4sm/AO-10.html
[05092004]
��AO-8 AMSAT-OSCAR 8
Catalog Number: 10703
Launch Date: March 3, 1978

Status: Non-Operational

Mode V/U (J) Linear Transponder (Non-Inverting): Non-Operational
Uplink: 145.9000 - 146.0000 MHz SSB/CW
Downlink 435.1990 - 435.2000 MHz SSB/CW

Mode V/U (J) TLM Beacon: Non-Operational
Downlink 435.0950 MHz CW

Mode V/A (A) Linear Transponder (Non-Inverting): Non-Operational
Uplink: 145.8500 - 145.9000 MHz SSB/CW
Downlink 29.4000 - 29.5000 MHz SSB/CW

Mode V/A (A) TLM Beacon: Non-Operational
Downlink 29.4020 MHz CW
[01152007]
��AO-6 AMSAT-OSCAR 6
Catalog Number: 06236
Launch Date: October 15, 1972

Status: Non-Operational

Uplink: 145.9000 - 146.0000 MHz SSB/CW
Downlink: 29.4500 - 29.5500 MHz SSB/CW
Beacons: 29.450 MHz
435.100 MHz
[01312008]
��AO-5 Australis-OSCAR 5
Catalog Number: 04321
Launch Date: January 23, 1970

Status: Non-Operational

Telemetry Beacons: 144.0500 MHz CW
29.4500 MHz CW
[01152007]
��OSCAR III
Catalog Number: 01293
Launch Date: March 09, 1965

Status: Non-Operational

Uplink: 145.9750 - 146.0250 MHz SSB/CW
Downlink: 144.3250 - 144.3750 MHz SSB/CW
[01012007]
��RS-15 RADIO SPORT RS-15
Catalog number: 23439
Launch Date: December 26, 1994

Status: Non-operational

Uplink: 145.858 to 145.898 MHz CW/USB
Downlink: 29.354 to 29.394 MHz CW/USB

Beacon 1: 29.352 MHz (intermittent)
Beacon 2: 29.398 MHz

SSB meeting frequency: 29.380 MHz (unofficial)
[06202004]
��RS-13 RADIO SPORT RS-13
Catalog number: 21089
Launch date: February 5, 1991

Status: Non-operational

Uplink: 21.260 to 21.300 MHz CW/USB
Downlink: 145.860 to 145.900 MHz CW/USB

Beacon: 145.860 MHz

Robot: 145.908 MHz
[05232004]
��RS-12 RADIO SPORT RS-12
Catalog number: 21089
Launch date: February 5, 1991

Status: Non-operational

Uplink: 21.210 to 21.250 MHz CW/USB
Downlink: 29.410 to 29.450 MHz CW/USB

Beacon: 29.408 MHz

Robot: 29.454 MHz
[05232004]
NNNN
/EX

ANS is released worldwide via the AMSAT ANS e-mail reflector and a live radiocast on the AMSAT-NA 20-meter net held each Sunday on 14.282 MHz. Pre-net operations start at 18:00 UTC, with current ANS bulletins transmitted to the eastern U.S. at 19:00 UTC and to the western U.S. at 19:30 UTC.

Information on AMSAT-NA is available at the following URL:
http://www.amsat.org

Mailing address:
AMSAT-NA
850 Sligo Avenue, Suite 600
Silver Spring, Maryland 20910-4703

Voice: 301-589-6062
888-322-6728
FAX: 301-608-3410

Currently, AMSAT-NA supports the following (free) mailing lists:

* AMSAT News Service (ANS)
* General satellite discussion (AMSAT-BB)
* Orbit data (KEPS)
* Manned space missions (SAREX)
* District of Columbia area (AMSAT-DC)
* New England area (AMSAT-NE)
* AMSAT Educational Liaison mailing list (AMSAT-EDU)
* AMSAT K-12 Educational Liaison mailing list (AMSAT-K12)

A daily digest version is available for each list.

To subscribe, or for more list information, visit the following URL:
http://www.amsat.org/mailman/listinfo/ans

In addition to regular membership, AMSAT-NA offers membership in the President's Club. Members of the President's Club, as sustaining donors to AMSAT Project Funds, will be eligible to receive additional benefits. Application forms are available from the AMSAT-NA Office.

This week's Weekly Satellite Report Editor is James French, W8ISS.

ANS is always dedicated to past ANS editor 'BJ' Arts, WT0N, and to the memory of longtime AMSAT supporters Werner Haas, DJ5KQ, Dennis Kitchen, G0FCL and John Branegan GM4IHJ.

Please send any amateur satellite news or reports to: ans-editor{at}amsat.org
NNNN
/EX

81. TOP INTERVIEW QUESTIONS & HOT PHOTOS & VIDEOS

Newsgroup: rec.radio.amateur.space
Date: 2012-05-25 13:10:25 UTC
From: devi <satyamsivam9030@gmail.com>
Message-ID: <b011cd87-5eb0-4a6f-a8ee-38b2f65a4e18@kw17g2000pbb.googlegroups.com>
Source record: 131

ALL INTERVIEW QUESTIONS& STUDY MATERIAL
http://newdotnetinterviewquestions.blogspot.in/

TOP DATING TIPS TO ENCOURAGE WOMEN FOR DATING
http://datingsitesdatingtips.blogspot.in/

FOR LATEST MOVIE UPDATED LINKS
NAGARJUNA DAMARUKAM MOVIE STILLS
http://actressgallery-kalyani.blogspot.in/2012/05/damarukam-movie-stills.html
ALLU ARJUN JULAYI MOVIE LATEST STILLS
http://actressgallery-kalyani.blogspot.in/2012/05/julayi-movie-stills.html
SUDIGADU MOVIE LATEST STILLS
http://actressgallery-kalyani.blogspot.in/2012/05/sudigadu-movie-stills.html
MR 7 MOVIE FILM GALLERY
http://actressgallery-kalyani.blogspot.in/2012/05/mr7-movie-stills.html
ALL THE BEST MOVIE STILLS
http://actressgallery-kalyani.blogspot.in/2012/05/all-best-movie-stills.html
Midatha Telugu movie Hot Namitha Stills
http://actressgallery-kalyani.blogspot.com/2012/05/midatha-movie-stills.html
OKA COLLEGE LOVE STORY MOVIE STILLS
http://actressgallery-kalyani.blogspot.in/2012/05/oka-college-love-story-movie-stills.html
KATRINA KAIF LATEST UNSEENED PHOTOS
http://actressgallery-kalyani.blogspot.com/2012/05/katrina-kaif-latest-pics.html
TAMIL ACTRESS ARUNDHATI HOT STILLS
http://actressgallery-kalyani.blogspot.com/2012/05/arundhati-tamil-actress.html
THANDHAVAM MOVIE STILLS
http://actressgallery-kalyani.blogspot.com/2012/05/thandavam-movie-stills.html
KHO KHO LATEST MOVIE SPICY STILLS
http://actressgallery-kalyani.blogspot.com/2012/05/kho-kho-movie-stills.html
Oh My Love Movie Latest Photo Gallery
http://actressgallery-kalyani.blogspot.com/2012/04/oh-my-love-movie-stills.html
Oka Romantic Crime katha Movie stills
http://actressgallery-kalyani.blogspot.in/2012/04/oka-romantic-crime-katha-movie-stills.ht
ml
DARUVU MOVIE LATEST HOT STILLS
http://actressgallery-kalyani.blogspot.com/2012/03/daruvu-movie-stills.html
Pavan Kalyan,Shruthi Hasan Gabbar Singh Movie Photos
http://actressgallery-kalyani.blogspot.in/2012/04/gabbar-singh-movie-stills.html
Good Morning Latest Movie Stills
http://actressgallery-kalyani.blogspot.com/2012/04/good-morning-movie-stills.html
EEGA MOVIE LATEST STILLS
http://actressgallery-kalyani.blogspot.com/2012/04/eega-movie-stills.html
Mem Vayasuku Vacham Latest Hot Stills
http://actressgallery-kalyani.blogspot.com/2012/04/mem-vayasuku-vacham-stills.html
DAMMU MOVIE LATEST STILLS

http://actressgallery-kalyani.blogspot.in/2012/04/dammu-movie-stills.html
ILEANA LATEST HOT PHOTOSHOOT
http://actressgallery-kalyani.blogspot.in/2012/01/ileana-latest-stills.html
ACTREESS SUPRIYA SHAILJA LATEST STILLS
http://actressgallery-kalyani.blogspot.in/2012/02/supriya-shailja-stills.html
SHEELA LATEST HOT STILLS
http://actressgallery-kalyani.blogspot.com/2012/01/sheela-latest-stills.html
KATRINA KAIF ITEM SONG STILLS
http://actressgallery-kalyani.blogspot.com/2012/01/katrina-kaif-item-song-stills.html
RITU KAUR LATEST PHOTO STILLS
http://actressgallery-kalyani.blogspot.com/2012/01/ritu-kaur-stills.html
SHRUTI HASSAN HOT IN 3 MOVIE
http://actressgallery-kalyani.blogspot.com/2011/11/shruti-hassan-in-3-movie.html
HOT KATRINA KAIF PHOTOS
http://actressgallery-kalyani.blogspot.com/2011/09/katrina-kaif.html

HOT LINKS FOR YOUTH ONLY
SHRUTHI HASSAN HALF SAREE STILLS
http://actressimages-9.blogspot.in/2012/05/shruti-hassan-half-saree-stills.html
TAMANNA HOT NAVEL PHOTOS
http://actressimages-9.blogspot.in/2012/05/tamanna-navel-photos.html
TRISHA LATEST HOT STILLS
http://actressgallery9.blogspot.in/2012/05/trisha.html
MONIKA LATEST HOT HD STLLS
http://actressgallery9.blogspot.in/2012/05/monika-stills.html
MALLIKA KAPOOR HOT SIZZLING STILLS
http://actressimages-9.blogspot.in/2012/05/mallika-kapoor.html
Richa Panai Stills
http://actressimages-9.blogspot.com/2012/04/richa-panai-stills.html
MADHAVI LATHA LATEST HOT STILLS
http://actressimages-9.blogspot.in/2012/04/madhavi-latha-stills.html
KRITI KHARBANDA HOT PHOTOSHOOT
http://actressimages-9.blogspot.in/2012/03/kriti-kharbanda.html
NEELAM UPADHYAY HOT PHOTOSHOOT
http://actressimages-9.blogspot.in/2012/03/neelam-upadhyay.html
SAMANTHA LATEST HOT ROMANTIC STILLS
http://actressimages-9.blogspot.in/2012/03/samantha-latest-stills.html
NAYANTHARA HOT WALLPAPERS
http://actressimages-9.blogspot.in/2012/01/nayanthara.html
ANU SMRUTHI LATEST HOT STILLS
http://actressimages-9.blogspot.in/2012/02/anu-smirthi-stills.html
AISHWARYA RAI LATEST HOT PICS
http://actressimages-9.blogspot.in/2012/01/aishwarya-rai.html

82. Weekly Highlights of Solar and Geomagnetic Activity, 21 - 27 May 2012

Newsgroup: rec.radio.amateur.space
Date: 2012-05-28 15:30:05 UTC
From: SWPC.Webmaster@noaa.gov
Message-ID: <20120528153001.7690833C6F@panix2.panix.com>
Source record: 132
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.dx,rec.radio.amateur.space,rec.radio.shortwave,rec.radio.info

```
:Product: Weekly Highlights and Forecasts
:Issued: 2012 May 28 1305 UTC
# Prepared by the US Dept. of Commerce, NOAA, Space Weather Prediction Center
# Product description and SWPC contact on the Web
# http://www.swpc.noaa.gov/weekly.html
#
# Weekly Highlights and Forecasts
#
Highlights of Solar and Geomagnetic Activity
21 - 27 May 2012

Solar activity was very low to low during the period. An impressive
CME was observed from a region beyond the west limb late on 26 May.
Associated with this non-Earth-directed CME were Type II (estimated
shock velocity 751 km/s) and Type IV radio sweeps as well as a
greater than 10 MeV proton event at geosynchronous orbit. There were
five regions numbered during the period with Region 1492 (S14,
L=281, class/area Eao/190, on 27 May) being one of the largest and
most active. This region produced six C-class flares, including a
long duration C3/Sf flare at 27/0552Z associated with a
non-Earth-directed CME observed off the southeast limb in LASCO
C2/C3 imagery.

A greater than 10 MeV proton event was observed at geosynchronous
orbit on 27 May. The event began at 27/0535 UTC, reached a peak of
14 pfu at 27/1045 UTC, and ended at 27/1235 UTC. This event was
associated with the CME observed beyond the west limb.

The greater than 2 MeV electron flux at geosynchronous orbit reached
high levels during 24 - 27 May.

Geomagnetic field activity ranged from quiet to minor storm levels
during the period. Mostly quiet levels occurred on 21 May. Activity
increased to quiet to active levels on 22 May. A further increase to
quiet to minor storm levels occurred on 23 May. Activity decreased
to quiet to unsettled levels during 24 - 25 May with brief active to
minor storm periods at high latitudes. Mostly quiet levels occurred
during 26 - 27 May. The increased activity during 22 - 25 May was
associated with a recurrent coronal hole high-speed stream (CH HSS).
ACE solar wind data indicated a co-rotating interaction region (CIR)
on 22 May in advance of the CH HSS. Associated with the CIR were
increased IMF Bt (peak 14 nT) and intermittent periods of southward
IMF Bz (maximum deflections to -11 nT). The CH HSS commenced on 23
May as wind speeds increased to around 700 km/s. The CH HSS began to
```

gradually subside on 24 May.

Forecast of Solar and Geomagnetic Activity
28 May - 23 June 2012

Solar activity is expected to be at very low to low levels during the period with a chance for M-class activity during 30 May through 13 June due to the return of old Region 1476 (N10, L=180, class/area Fkc/1050 on 09 May).

A chance for a greater than 10 MeV proton event at geosynchronous orbit exists from 30 May through 13 June due to the return of old Region 1476.

The greater than 2 MeV electron flux at geosynchronous orbit is expected to reach high levels during 28 - 29 May, 06 - 12 June, and 20 - 23 June in response to recurrent CH HSS effects. Normal to moderate levels are expected during the rest of the period.

Geomagnetic field activity is expected to be at quiet to unsettled levels during most of the period. There is a chance for isolated active periods during 4 - 5 June and again during 18 - 19 June due to recurrent CH HSS effects.

83. Crossposting Permitted to rec.radio.amateur.moderated

Newsgroup: rec.radio.amateur.space
Date: 2012-06-01 06:00:03 UTC
From: rram@panix.com
Message-ID: <radio/ham-radio/moderated/crossposting-1-1338530401@panix.com>
Source record: 133
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space,rec.radio.info

```
Posted-By: auto-faq 3.3.2 beta (PGPMoose V2.0, Perl 5.005)
Archive-name: radio/ham-radio/moderated/crossposting
Revision: 1.2 2011/11/02 04:08:53
Posting-Frequency: posted monthly
URL: http://www.panix.com/~rram/usenet/rram/index.html

Changes followed by "|".

After a 30-day public discussion and feedback period to gauge reader
opinions in March of 2009:

http://groups.google.com/group/rec.radio.amateur.moderated/browse_thread/thread/d7d337db35
f23326

the rec.radio.amateur.moderated Moderation Team had decided to consider |
amending its charter, and permit limited simultaneous crossposting to
rec.radio.amateur.moderated and one other unmoderated
amateur-radio-related discussion newsgroup. After a successful trial |
period (90 days, through early July 2009), we decided to adopt this |
change permanently. |

Approved rec.radio.amateur.* newsgroups are those that are currently
listed in the latest version of the "List of Big Eight Newsgroups" which
is crossposted monthly to news.announce.newgroups, news.groups, and
news.lists.misc.

Approved alt.radio.amateur.* and alt.ham-radio.* newsgroups are those
that have been created consistent with the suggestions in "So You Want
to Create an Alt Newsgroup" at:

http://www.faqs.org/faqs/alt-creation-guide/

Approved regional hierarchy newsgroups are those that contain either
"radio.amateur" or "ham-radio" in their names, including
uk.radio.amateur and aus.radio.amateur.misc.

We will make every reasonable effort to keep our list of approved
newsgroups up-to-date. In case we have overlooked any, and a submission
is rejected in error as a result, the rejected submitter can E-mail us
at our administrative contact address (in the signature at the bottom of
this article, and the default Reply-To for the rejection message)
requesting that it be added, and that the article be approved. We may
still choose to reject articles crossposted to any alt.* newsgroup with
an inappropriate name, including obscene language, embedded
name-calling, or encouragement of unlawful conduct.
```

Please direct any comments, questions, or criticisms to
rec-radio-amateur-moderated-request@panix.com.

84. ANS-155 AMSAT News Service Weekly Bulletins

Newsgroup: rec.radio.amateur.space
Date: 2012-06-03 01:16:39 UTC
From: JoAnne Maenpaa <k9jkm@comcast.net>
Message-ID: <001a01cd4126$7e274d40$7a75e7c0$@net>
Source record: 134
Cross-posted to: rec.radio.amateur.space,rec.radio.info

```
AMSAT NEWS SERVICE
ANS-155

ANS is a free, weekly, news and information service of AMSAT North
America, The Radio Amateur Satellite Corporation. ANS reports on the
activities of a worldwide group of Amateur Radio operators who share an
active interest in designing, building, launching and communicating
through analog and digital Amateur Radio satellites.

Please send any amateur satellite news or reports to:
ans-editor at amsat.org

**********************************************************************
* Nominating petitions for the election of upcoming open seats on *
* the AMSAT-NA Board of Directors must be received at the AMSAT *
* Office by June 15, 2012. The details of the nominating process *
* are posted on the AMSAT front page news at http://www.amsat.org *
**********************************************************************

In this edition:
* STEM Education Identified as Critical for Continued Rides to Space
* AMSAT-NA Board of Directors Nominations
* AMSAT-UK Colloquium 2012 Second Call for Speakers
* Successful ARISS Contact as Northland Preparatory Academy Calls ISS
* Multiple CubeSats Autonomously Docking May Build Large Satellites
* LVB Tracker Boxes in Stock at the AMSAT Office
* 13cm Band Rules Expanded to Allow MedRadio Adjacent to Satellites
* Funding Availability Key to Final Acceptance in QB50 Project
* AMSAT at Ham-Com, 8-9 June, Plano, TX, Special Event K5P
* Satellite Shorts From All Over

SB SAT @ AMSAT $ANS-155.01
ANS-155 AMSAT News Service Weekly Bulletins

AMSAT News Service Bulletin 155.01
>From AMSAT HQ SILVER SPRING, MD.
June 3, 2012
To All RADIO AMATEURS
BID: $ANS-155.01

----------------------------------------------------------------------

STEM Education Identified as Critical for Continued Rides to Space

The AMSAT Forum at the 2012 Dayton Hamvention featured news of the
educational opportunities for AMSAT to contribute to the innovation
```

in attracting and retaining students in science, technology, engineering and mathematics, or STEM, disciplines. Educators have identified STEM programs as a priority in strengthening the Nation's future workforce.

"Education is important to us", said AMSAT Vice-President Educational Relations Mark Hammond N8MH, "It's a part of our mission and vision." Mark noted several key points of AMSAT's support for STEM education:

+ AMSAT is a non-profit volunteer organization which designs, builds and operates experimental satellites and promotes space education.

+ AMSAT works in partnership with government, industry, educational institutions and fellow amateur radio societies.

+ AMSAT encourages technical and scientific innovation, and promotes the training and development of skilled satellite and ground system designers and operators.

As evidenced by this year's acceptance of AMSAT's Project Fox cubesat in the NASA "Educational Launch of NanoSat", the ELaNa program, we were selected on our merit in support of NASA strategic and educational goals. Education is quickly becoming critical for our ride to space.

The recently formed Educational Partnership between AMSAT and ARRL, including NASA is looking for help. We need to develop an education program on the ground starting now. We have resources already available for STEM education in both the K-12 classroom and at the University level while our satellite builders work on the next flight.

For example, the huge collection of telemetry data collected during the recent ARISSat-1 flight is available on our FTP server. This data presents an opportunity for the utilization of satellite data in the classroom (through plotting, graphing, analyzing).

An immediate need is for volunteers to collect and organize existing STEM related lesson plans and ideas from the web, useful to K-12 educators and relevant to amateur radio and satellite. Critical steps such as this will allow ARISSat-1 telemetry data to be used in the classroom. Similar lesson plans and ideas can be used for educational purposes in future satellite missions, such as Fox-1 and Fox-2.

To support this effort specific tasks have been identified and now volunteers are needed to support:

+ Educators: We need lesson plans/ideas related to satellites and amateur radio. ARISSat-1 telemetry data needs to be used in the classroom!
+ Educators: sign up for ARRL Teacher's Institute program!
+ Web content person for AMSAT's education web pages.
o Also to maintain a calendar of amateur radio youth events.

+ Archivist/publicist of satellite educational activities (photos, stories for AMSAT Journal, press, videos).
+ Mentors and ground station operators (with equipment!) for ARISS contacts.
+ Look for opportunities to engage youth, and document it (photos, articles, AMSAT Journal, press).

To volunteer contact Mark directly at n8mh at amsat.org. The AMSAT-EDU mailing list is the place to exchange education project ideas and to learn how to help with our educational outreach. Information on how to join the AMSAT-EDU list can be found on the AMSAT web at: http://www.amsat.org/mailman/listinfo

AMSAT's vision is to deploy satellite systems with the goal of providing wide area and continuous coverage. AMSAT will continue active participation in human space missions and support a stream of LEO satellites developed in cooperation with the educational community and other amateur satellite groups. This is a path to getting Fox-1 in orbit, and our future Fox-2, ARISSat-2, -3, -?

Again, the key contact is AMSAT Vice-President Educational Relations Mark Hammond N8MH - n8mh at amsat.org.

[ANS thanks Mark Hammond, N8MH for the above information]

AMSAT-NA Board of Directors Nominations

It is time to submit nominations for the upcoming open seats on the AMSAT-NA Board of Directors. A valid nomination requires either one current Member Society, or five current individual members in good standing, to nominate an AMSAT-NA member for the position.

Three directors and two alternate directors have terms expiring this year. The director seats open for election are held by Tom Clark, K3IO; Lou McFadin, W5DID; and Gould Smith, WA4SXM. The alternate director seats open for election are held by Mark Hammond, N8MH and Patrick Stoddard, WD9EWK.

The three nominees receiving the highest number of votes will be seated as regular board members with two year terms. The two nominees receiving the next highest number of votes will be seated as alternate directors for one year.

Written nominations, consisting of names, calls and individual signatures, should be mailed to: AMSAT-NA, 850 Sligo Ave #600, Silver Spring, MD, 20910. They must be received no later than June 15th. No other action is required.

Nominations may also be made by electronic means including e-mail, FAX, or electronic image of a petition. Electronic petitions should be sent to MARTHA@AMSAT.ORG or faxed to 301-608-3410, and also must be received by June 15th. If using any electronic submission, there

is a second, verifying step:

ELECTRONIC SUBMISSIONS WITHOUT THIS SECOND, WRITTEN VERIFICATION ARE NOT VALID UNDER THE EXISTING AMSAT-NA BYLAWS. A verifying traditional written petition MUST be received at the AMSAT-NA office at the above address within 7 days following the close of nominations.

[ANS Thanks AMSAT Secretary Alan Biddle, WA4SCA for the above information]

AMSAT-UK Colloquium 2012 Second Call for Speakers

This is the second call for speakers for the AMSAT-UK International Space Colloquium 2012 which, due to the Olympic & Paralympic Games, will be held the weekend of September 15-16, 2012 at the Holiday Inn, Guildford, GU2 7XZ, United Kingdom.

AMSAT-UK has posted details of the 2012 Colloquium at: http://www.uk.amsat.org/colloquium/twelve

AMSAT-UK invites speakers, to cover topics about micro-satellites, CubeSats, nano-sats, space and associated activities, for this event.

They are also invited to submit papers for subsequent publishing on the AMSAT-UK web site. We normally prefer authors to present talks themselves rather than having someone else give them in the authors' absence. We also welcome "unpresented" papers for the web site.

We appreciate that it is not always possible to give a firm indication of attendance at this stage but expressions of interest would be appreciated.

Submissions should be sent *ONLY* to G4DPZ, via the following routes:

+ e-mail: david dot johnson at blackpepper dot co dot uk
+ Postal address at http://www.qrz.com/db/G4DPZ

AMSAT-UK also invite anyone with requests for Program Topics to submit them as soon as possible to G4DPZ. Invitations for any papers on specific subjects will be included in the future call. Likewise if anyone knows of a good speaker, please send contact and other information to G4DPZ.

AMSAT-UK http://www.uk.amsat.org/

[ANS thanks Dave Johnson, G4DPZ and AMSAT-UK for the above information]

Successful ARISS Contact as Northland Preparatory Academy Calls ISS

On Thursday, May 24, students from Northland Preparatory Academy in Flagstaff, Arizona participated in an Amateur Radio on the Interna-

tional Space Station (ARISS) contact with Joe Acaba, KE5DAR on the ISS.

Approximately 550 students, staff and administrators, as well as Dr. Jeffrey Hall, director of the Lowell Observatory, and the mayor were in attendance. The contact complemented a Science, Technology, Engineering and Math (STEM) curriculum. Video of the event, including Dr. Hall's presentation, has been posted on-line.
See: http://spacescienceteaching.blogspot.com/

The Arizona Daily Sun ran an article on the event which may be found here: http://tinyurl.com/ISS-AZDailySun (azdailysun.com)

[ANS thanks Carol, KB3LKI, and the ARISS Status Report for the Week of May 29, 2012 for the above information]

Multiple CubeSats Autonomously Docking May Build Large Satellites

This week AMSAT-UK, SpaceRef.com, and SSTL have announced plans to develop the 'STRaND-2' mission at the University of Surrey and Surey Satellite Technology Limited (SSTL). This mission will test a novel in-orbit docking system based upon XBOX Kinect technology that could change the way space assets are built, maintained and decommissioned.

STRaND-2 (Surrey Training, Research and Nanosatellite Demonstrator) programme, following on from the smartphone-powered STRaND-1 satellite that is near completion. Similar in design to STRaND-1, the identical twin STRaND-2 satellites will each be a 3 unit Cubesat. Components from the XBOX Kinect games controller to scan the local area and provide the satellites with spatial awareness on all three axes.

SSTL says on their web site, "The STRaND-2 twins will be separated after launch. After the initial phase of system checks, the two satellites will be commanded to perform the docking procedure and, when in close proximity, the Kinect-based docking system will provide the satellites with 3D spatial awareness to align and dock. Other applications for STRaND-2 include the safe removal of space debris and spacecraft maintenance, with a low cost "snap-on" nanosatellite providing backup power, propulsion or additional on-board computing capability."

SSTL Project Lead Shaun Kenyon says, "We were really impressed by what MIT had done flying an autonomous model helicopter that used Kinect and asked ourselves: Why has no-one used this in space? Once you can launch low cost nanosatellites that dock together, the possibilities are endless, like space building blocks."

Dr. Chris Bridges, Surrey Space Centre Project Lead says, "It may seem far-fetched, but our low cost nanosatellites could dock to

build large and sophisticated modular structures such as space telescopes. Unlike today's big space missions, these could be re-configured as mission objectives change, and upgraded in-orbit with the latest available technologies."

Referenced web sites:
http://www.uk.amsat.org/7851
http://www.spaceref.com/news/viewpr.html?pid=37215
http://tinyurl.com/Strand2-News (www.sstl.co.uk)

[ANS thanks AMSAT-UK, SpaceRef.com, and SSTL for the above information]

LVB Tracker Boxes in Stock at the AMSAT Office

Martha says she now has LVB Tracker boxes in stock at the AMSAT Office. The cost is $200 plus $20 shipping.

The AMSAT Store Website is currently down due to technical issues so you can place your order via these routes:

+ Call Martha at the AMSAT Office (301-589-6062) 10:00 AM-6:00 PM EDT
+ Fax - 301-608-3410
+ Mail - AMSAT, 850 Sligo Ave #600, Silver Spring MD 20910

The LVB Tracker is a rotator interface designed to to be used as an interface between tracking software and the Yaesu 4500/5500 series of Az/El rotators.

Here's why you want one:

+ Several physical interface options including RS-232, USB and TCP/IP over 10/100 Ethernet (tested by not implemented)

+ Uses standard EasyComm and Yaesu GS-232 protocols

+ Cross-platform compatibility - Windows, Linux, BSD, Mac

+ Compatible with existing real-time prediction programs such as SatPC32 and Nova

+ Open source

+ Integrated firmware programmer for easy installation and upgrade

Watch a demo of the LVB Track Interface with Yaesu G-5500 rotator at:
http://www.youtube.com/watch?v=7ePw-ReMRwA (does not use the AMSAT enclosure)

[ANS thanks Martha at the AMSAT Ofice for the above information]

13cm Band Rules Expanded to Allow MedRadio Adjacent to Satellites

The ARRL is reporting in a First Report and Order and a Further Notice of Proposed Rulemaking (ET 08-59) released on May 24, the FCC decided to expand the Part 95 Personal Radio Service rules to allow medical devices to operate on a secondary basis in the 2360-2400 MHz band. International amateur satellite operations are allocated between 2400-2450 MHz, adjacent to the new devices.

The new allocation is Medical Body Area Networks (MBAN) which provide a way for health care facilities to monitor their patients via wireless networks. Because use of these frequencies will be on a secondary basis, MBAN stations will not be allowed to cause interference to, and must accept interference from, primary services, including radio amateurs who operate on a terrestrial primary basis in the 2390-2395 MHz and 2395-2400 MHz bands.

The ARRL has posted their full analysis and report at:
http://tinyurl.com/13cm-Medical-Allocation (arrl.org)

[ANS thanks the ARRL for the above information]

Funding Availability Key to Final Acceptance in QB50 Project

The QB50 Project, funded by the European Commission, plans to orbit 50 CubeSats separated by a few hundred kilometers and carrying identical sensors to study Earth's lower layers of the thermosphere/ionosphere and study effects of satellite re-entry. All 50 CubeSats will be launched out of Murmansk, Russia, into a circular orbit with 79 degree inclination at 320 km altitude in the first half of 2015. Full details are published at: https://www.qb50.eu.

The project is run by an international consortium under the leadership of the von Karman Institute (VKI) near Brussels. The Call for Proposals for CubeSats carrying the standard sensor package which may also include additional experiments closed on April 30, 2012. VKI reports the response to this Call resulted in proposals for 70 CubeSats from 38 countries in the following categories:

+ 53 standard 2U CubeSats for atmospheric science.

+ 7 proposals for In-Orbit-Demonstration (IOD) 3U CubeSats for testing new technologies or minitaurised science sensors which also include the standard science sensors.

+ 5 proposals for IOD 3U CubeSats which do not include the standard science sensors.

+ 1 proposal for IOD 2U CubeSats which also include the standard science sensors.

+ 4 proposals for IOD 2U CubeSats which do not include the standard science sensors.

+ 2 proposals for interdisciplinary science.

VKI, with the help of external reviewers, is now in the process of evaluating the 70 proposals, aimed towards a selection of 50 Cube-Sats to be flown on QB50.

VKI wrote in the 31 May 2012 issue of the QB50 Newsletter, "The availability of funding for developing a CubeSat will be a critical issue in the selection process. At this stage, it is not known which proposals will actually be able to obtain the required funding. The final selection of 50 CubeSats can only be made once the availability of funding is established. CubeSat teams who submitted a proposal should now contact their national funding agencies and/or industrial sponsors to obtain the funding. The process of securing this funding should be completed by 1 October 2012 with the signing of a 'Contractual Agreement' between the university and VKI."

In the coming months, VKI will support the CubeSat teams in their efforts to obtain the funding, e.g. by sending a 'Letter of Support'. It is not expected that all 70 CubeSat teams will be able to sign the Contractual Agreement by 1 October, therefore, the de facto down-selection from 70 to 50 CubeSats will be made based on securing the funding by each team.

In some cases, funding agencies will only be able to provide a part of the funding. Teams who only received approval for part of the funding should consider the possibility of collaboration with another team that also received only a part of the requested funding.

[ANS thanks The QB50 Project and von Karman Institute for the above information]

AMSAT at Ham-Com, 8-9 June, Plano, TX, Special Event K5P

AMSAT will have an AMSAT Booth, Satellite Demonstrations, and two Satellite Talks at Ham-Com in Plano, TX, on 8-9 June 2012. The talks will be given by Douglas Quagliana, KA2UPW/5, and Keith Pugh, W5IU.

This year there will be a Special Event activity (sponsored by the Plano Amateur Radio Klub) associated with Ham-Com and the call sign will be K5P. AMSAT's Satellite Demonstrations will be conducted using K5P as part of the Special Event. Additional details about Ham-Com are available at: http://www.hamcom.org/

If you attend Ham-Com, drop by and see us. In addition, if you can spare an hour or two, we could use the help in the AMSAT Booth and doing the Demos.

We plan to work as many of the following Satellite Passes as possible:

Ham-Com 2012 Demos

Grid EM13pb

Min El = 10 deg

Time Zone UTC

WinAos QTH: -96.7/33.1 T#: 12577 Sat.: 7 [Standard]

Day	Object	AOS (U)	LOS	Period	maxEl	AZ	
08.06.2012	VO-52	13:53	14:00	07 39	031	-	172
08.06.2012	VO-52	15:30	15:34	04 14	319	-	259
08.06.2012	HO-68	15:41	15:54	13 48	029	-	176
08.06.2012	HO-68	17:29	17:40	11 28	350	-	238
08.06.2012	FO-29	18:43	18:56	13 64	020	-	184
08.06.2012	AO-27	18:44	18:51	07 22	118	-	018
08.06.2012	SO-50	20:08	20:15	07 19	008	-	100
08.06.2012	AO-27	20:23	20:32	09 35	196	-	331
08.06.2012	FO-29	20:30	20:38	08 18	332	-	248
08.06.2012	SO-50	21:48	21:56	08 43	317	-	174

WinAos QTH: -96.7/33.1 T#: 12578 Sat.: 7 [Standard]

Day	Object	AOS (U)	LOS	Period	maxEl	AZ	
09.06.2012	VO-52	14:10	14:17	07 66	019	-	184
09.06.2012	AO-07	14:11	14:19	08 16	336	-	268
09.06.2012	HO-68	15:24	15:36	12 35	034	-	164
09.06.2012	HO-68	17:12	17:24	12 36	355	-	227
09.06.2012	FO-29	17:50	17:59	09 23	048	-	148
09.06.2012	AO-27	18:18	18:22	04 12	084	-	036
09.06.2012	FO-29	19:34	19:46	12 51	359	-	213
09.06.2012	AO-27	19:54	20:04	10 66	174	-	343
09.06.2012	SO-50	20:36	20:44	08 47	345	-	134
09.06.2012	AO-07	21:21	21:30	09 17	091	-	015

Come see us or talk to the AMSAT Team!

[ANS thanks Keith Pugh, W5IU for the above information]

Satellite Shorts From All Over

+ Venus will pass in front of the sun on 6 June 2012. Bob Bruninga, WB4APR will be in Japan to observe the event. He has created a web page, "The 2012 Transit of Venus using HAM Radio" including a list of selected calling frequencies, see: http://aprs.org/VenusTransit2012.html

+ The 2012 AMSAT Annual Meeting and Symposium will be held at the Holiday Inn, Orlando (Florida) Airport on October 26-28, 2012. The First Call for Papers has been issued. The Symposium Team requests a tentative title of your presentation as soon as possible, with final copy to be submitted by October 1 for inclusion in the printed proceedings. Abstracts and papers should be sent to Dan Schultz, N8FGV, at n8fgv@amsat.org. Watch for the latest 2012 Symposium information to be posted on the AMSAT web at:

http://www.amsat.org/amsat-new/symposium/2012/index.php

+ The UK Space Agency has released a YouTube video celebrating the UK's 50 years in space: http://tinyurl.com/UK-50-In-Space (Southgate)

+ Eric Knaps, ON4HF built an arrow antenna for working the FM satellites. Photos posted at: https://picasaweb.google.com/ON4HF.Eric/PortableSatAntenna

+ ESA astronaut Andre Kuipers published a photo gallery during the arrival and docking at the ISS of the SpaceX Dragon resupply ship. See: http://tinyurl.com/Dragon-Photo-Gallery (UniverseToday.com)

+ A 50 minute interview with Neil Armstrong made this year is now available. The video is split into 4 parts which can be seen at: http://thebottomline.cpaaustralia.com.au/ (Trevor, M5AKA)

+ The May 20 annular eclipse was photographed by NASA's Lunar Reconnaissance Orbiter as it turned its camera to look back home. Images of the Earth with the Moon's fuzzy shadow are posted on-line at: http://tinyurl.com/LROC-Eclipse (UniverseToday.com) For eclipse photos from Earth check out: http://www.universetoday.com/95469/annular-eclipse-redux/

+ There are two new Hamvention 2012 music videos on YouTube produced by Joe Eisenberg, K0NEB. One is called Hamvention 2012 "Band On The Run" and the other is titled Hamvention 2012 "Gimme Dat Ding." To find them just put the word joehusker into the search YouTube search line.

[ANS thanks everyone for the above information]

/EX

In addition to regular membership, AMSAT offers membership in the President's Club. Members of the President's Club, as sustaining donors to AMSAT Project Funds, will be eligible to receive additional benefits. Application forms are available from the AMSAT Office.

Primary and secondary school students are eligible for membership at one-half the standard yearly rate. Post-secondary school students enrolled in at least half time status shall be eligible for the student rate for a maximum of 6 post-secondary years in this status. Contact Martha at the AMSAT Office for additional student membership information. And with that please keep in mind the tidal forces of the Moon (and the Sun) don't only act on the oceans, they act on the land as well. If you stand on the equator, the land beneath you will go up and down by as much as 21 inches (55 centimeters) over the course of a day.

73,
This week's ANS Editor,
JoAnne Maenpaa, K9JKM

85. Weekly Highlights of Solar and Geomagnetic Activity, 28 May - 03 June 2012

Newsgroup: rec.radio.amateur.space
Date: 2012-06-04 15:30:07 UTC
From: SWPC.Webmaster@noaa.gov
Message-ID: <20120604153001.92E1333C8E@panix2.panix.com>
Source record: 135
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.dx,rec.radio.amateur.space,rec.radio.shortwave,rec.radio.info

```
:Product: Weekly Highlights and Forecasts
:Issued: 2012 Jun 04 1310 UTC
# Prepared by the US Dept. of Commerce, NOAA, Space Weather Prediction Center
# Product description and SWPC contact on the Web
# http://www.swpc.noaa.gov/weekly.html
#
# Weekly Highlights and Forecasts
#
Highlights of Solar and Geomagnetic Activity
28 May - 03 June 2012

Solar activity was at very low to moderate levels during the period.
Very low levels were observed from 28 - 29 May. An increase to low
levels was observed from 30 May - 02 June as Region 1493 (N15,
L=209, class/area Dso/170 01 June) and Region 1496 (N16, L=199
class/area Cso/120 on 01 June) rotated onto the visible disk.
Another increase to moderate levels was observed on 03 June as
Region 1496 produced an M3 x-ray flare at 03/1755 UTC. Associated
with this event were both a Type II radio sweep (estimated shock
speed of 1077 km/s) signature and CME supporting imagery from the
LASCO C2 imager. After analysis, this CME was determined to not be
Earth directed. Region 1493 was the most active region during the
period producing 8 C-class x-ray events.

No proton events were observed at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit was at
high levels on 28 - 29 May and then decreased to moderate to normal
levels for the remainder of the period.

Geomagnetic field activity was at quiet to minor storm levels during
the period. Quiet conditions were observed from 28 - 29 May. Late on
29 May, solar wind speeds, as measured by the ACE spacecraft,
increased from 350 km/s to around 450 km/s. Solar wind speeds
remained elevated till late on 31 May. In conjunction with these
elevated solar winds, quiet to unsettled levels were observed from
30 - 31 May with isolated active and minor storm levels at high
latitudes. A return to quiet levels was observed from 01 - 02 June.
Late on 02 June, an isolated active period was observed due to
prolonged negative IMF Bz measured by the ACE spacecraft. On 03
June, an increase from quiet to minor storm levels with major storm
periods observed at high latitudes was observed. This increase in
activity was associated with a continuation of sustained negative
IMF Bz from 02 June.
```

Forecast of Solar and Geomagnetic Activity
04 June - 30 June 2012

Solar activity is expected to be at low levels with a chance for M-class activity from 04 - 15 June.

No proton events are expected at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit is expected to be at normal to moderate levels during 04 - 05 June, 13 - 19 June, and 26 - 30 June. High levels are expected during 06 - 12 June, and 20 - 25 June.

Geomagnetic field activity is expected to be at active levels with a chance for minor storm levels on 04 - 05 June as a coronal hole high speed stream (CH HSS) becomes geoeffective. Quiet to active levels are expected on 06 June as CH HSS effects persist. A decrease to quiet to unsettled levels is expected on 07 - 08 June as the CH HSS wanes. Predominantly quiet levels are expected from 09 - 17 June. Quiet to active levels are expected from 18 - 20 June as another CH HSS becomes geoeffective. A return to mostly quiet levels is expected for the remainder of the period.

86. Radio Meteor Obs. Bull. May 2012 eta Aquarids

Newsgroup: rec.radio.amateur.space
Date: 2012-06-06 19:04:27 UTC
From: Chris Steyaert <observations@rmob.org>
Message-ID: <vbavs75dr329d9v63hijaadpuvm2de8f93@4ax.com>
Source record: 136
Cross-posted to: rec.radio.amateur.space,sci.astro.amateur

Radio Meteor Observation Bulletin No. 226 of May 2012 (85K) is available now as

http://www.rmob.org/rmobtext/rmob1205.txt

More information and the visual presentation of the hourly forward scatter
counts can be found on

http://www.rmob.org

Chris

87. get kelp

Newsgroup: rec.radio.amateur.space
Date: 2012-06-08 02:12:15 UTC
From: mark morgan <konstans@hotmail.com>
Message-ID: <jqrmsl$6ct$1@adenine.netfront.net>
Source record: 137

Gary Sokolisch wrote:
> 2600

stalk somewhere else

--- Posted via news://freenews.netfront.net/ - Complaints to news@netfront.net ---

88. ANS-162 AMSAT News Service Weekly Bulletins

Newsgroup: rec.radio.amateur.space
Date: 2012-06-10 01:04:22 UTC
From: JoAnne Maenpaa <k9jkm@comcast.net>
Message-ID: <003701cd46a4$ef05d490$cd117db0$@net>
Source record: 138
Cross-posted to: rec.radio.amateur.space,rec.radio.info

AMSAT NEWS SERVICE
ANS-162

ANS is a free, weekly, news and information service of AMSAT North America, The Radio Amateur Satellite Corporation. ANS reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in designing, building, launching and communicating through analog and digital Amateur Radio satellites.

Please send any amateur satellite news or reports to:
ans-editor at amsat.org

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* Nominating petitions for the election of upcoming open seats on *
* the AMSAT-NA Board of Directors must be received at the AMSAT *
* Office by June 15, 2012. The details of the nominating process *
* are posted on the AMSAT front page news at http://www.amsat.org *
****

In this edition:
* Status of ISS Ham Radio Operations
* AMSAT-NA Board of Directors Nominations Due This Friday, June 15
* AMSAT 2012 Symposium Announcement and Second Call for Papers
* SA AMSAT Update Reports That SumbandilaSat Recovery Work Continues
* Amateur Radio Reports Requested for AubieSat-1
* ARRL 9 cm Band Plan Updated
* LVB Tracker Boxes in Stock at the AMSAT Office
* 13 Original Colonies Special Event Includes Satellite Operations
* Field Day - Two Weeks and Counting
* Satellite Shorts From All Over

SB SAT @ AMSAT $ANS-162.01
ANS-155 AMSAT News Service Weekly Bulletins

AMSAT News Service Bulletin 162.01
>From AMSAT HQ SILVER SPRING, MD.
June 10, 2012
To All RADIO AMATEURS
BID: $ANS-162.01

Status of ISS Ham Radio Operations

ISS Amateur Radio Project Engineer Kenneth Ransom, N5VHO reports the ARISS digipeater has changed frequency from 145.825 MHz (up/down) to

437.550 MHz (up/down). The same digi alias ARISS is still used.

This change was started with the docking of the ESA Automated Transfer Vehicle (ATV). The ATV is an expendable, unmanned resupply spacecraft delivering propellant, water, air, payloads and experimental supplies to the International Space Station (ISS).

Packet operations were moved to the Columbus Module UHF radio when the Kenwood D700 radio was recently powered off due to needing an additional air purifier to support the ATV. Normally the air purifier is located in the ATV but recent power support issues related to the ATV and ISS necessitated the system be relocated to the Service Module. The purifier is now using the power outlet that the Kenwood radio normally uses. The Russian team has agreed to briefly power the purifier off for the scheduled ARISS school events but then will re-activate the purifier right afterwards. This appears to be a long term impact as ATV is currently scheduled to depart from ISS in September.

[ANS thanks Kenneth Ransom, N5VHO for the above information]

AMSAT-NA Board of Directors Nominations Due This Friday, June 15

It is time to submit nominations for the upcoming open seats on the AMSAT-NA Board of Directors. A valid nomination requires either one current Member Society, or five current individual members in good standing, to nominate an AMSAT-NA member for the position.

Three directors and two alternate directors have terms expiring this year. The director seats open for election are held by Tom Clark, K3IO; Lou McFadin, W5DID; and Gould Smith, WA4SXM. The alternate director seats open for election are held by Mark Hammond, N8MH and Patrick Stoddard, WD9EWK.

The three nominees receiving the highest number of votes will be seated as regular board members with two year terms. The two nominees receiving the next highest number of votes will be seated as alternate directors for one year.

Written nominations, consisting of names, calls and individual signatures, should be mailed to: AMSAT-NA, 850 Sligo Ave #600, Silver Spring, MD, 20910. They must be received no later than June 15th. No other action is required.

Nominations may also be made by electronic means including e-mail, FAX, or electronic image of a petition. Electronic petitions should be sent to MARTHA@AMSAT.ORG or faxed to 301-608-3410, and also must be received by June 15th. If using any electronic submission, there is a second, verifying step:

ELECTRONIC SUBMISSIONS WITHOUT THIS SECOND, WRITTEN VERIFICATION ARE NOT VALID UNDER THE EXISTING AMSAT-NA BYLAWS. A verifying

traditional written petition MUST be received at the AMSAT-NA office at the above address within 7 days following the close of nominations.

[ANS Thanks AMSAT Secretary Alan Biddle, WA4SCA for the above information]

AMSAT 2012 Symposium Announcement and Second Call for Papers

This is the second call for papers for the 2012 AMSAT Annual Meeting and Space Symposium to be held in Orlando, Florida on the weekend of October 26-28, 2012 at the Holiday Inn, Orlando Airport Hotel.

Proposals for papers, symposium presentations and poster presentations are invited on any topic of interest to the amateur satellite community:

+ Papers for publication in the Proceedings

+ Symposium Presentations

+ Poster Presentations

+ Equipment and Operating Demonstrations

We request a tentative title of your presentation as soon as possible, with final copy to be submitted by October 1 for inclusion in the printed proceedings.

Abstracts and papers should be sent to Dan Schultz, N8FGV, at n8fgv at amsat.org.

The Symposium weekend will feature:

+ Space Symposium with Amateur Satellite Presentations

+ Operating Techniques, News, & Plans from the Amateur Satellite World

+ Board of Directors Meeting open to AMSAT members

+ Meet Board Members and Officers

+ Annual General Membership Meeting

+ Annual Banquet-Keynote Speaker and Door Prizes

If you are interested in a Monday Trip (October 29) to the Kennedy Space Center please contact Martha via email: martha at amsat.org.

The trip will include a round trip bus from the hotel and entrance to the Space Center. The cost will be about $100. This is a wonderful experience for those that haven't been and for those that have been multiple times. We need to get an idea of how many will participate to select the correct bus.

Watch the AMSAT Symposium web pages for the latest updates:
http://www.amsat.org/amsat-new/symposium/2012/index.php

[ANS thanks Dan Schultz, N8FGV for the above information]

SA AMSAT Update Reports That SumbandilaSat Recovery Work Continues

SA AMSAT posted a report on their web (http://www.amsatsa.org.za/)
there is still a recovery opportunity for SumbandilaSat.

The team at SunSpace are still incrementally reading back the program code from the nine power modules in an effort to determine the extent of the corruption. With SumbandilaSat going through eclipses, the satellite is not as much available as the team would like. SumbandilaSat's batteries failed which means that the satellite is only active when the solar panels are illuminated.

"We need the information to confirm that the changes we made to stop repeated corruption were effective." Johann Lochner ZR6CBC who spends considerable of his free time on recovery of SumbandilaSat said. "It is our aim to ultimately reprogram one of the power modules to automatically switch the amateur radio transponder on and off."

Because of the shorter illumination of the solar panels in the Southern hemisphere and most likely poor orientation of the satellite with respect to the sun, progress is much slower than originally anticipated. "Where we had three passes to work with in January we currently have one", Johann said.

In early June 2011 for an unknown reason (but probably related to a major radiation event on 7 June) the primary controller on the power distribution unit (PDU) powering the On-Board Computer (OBC) stopped responding to commands from the ground station.

It later appeared that the battery had failed and nothing was heard from the satellite for some time. The ground stations at SANSA Space operations at Hartbeeshoek and the Electronic Systems Laboratory at Stellenbosch University are receiving telemetry when the satellite's solar panels are illuminated by the sun.

Johann said with SumbandilaSat responding when it is in full sunlight the team is confident that some operations will be restored even to the point where it may be possible to do some imaging and have the amateur radio transponder back in operation.

[ANS thanks SA AMSAT for the above information]

Amateur Radio Reports Requested for AubieSat-1

John Klingelhoeffer, WB4LNM, AubieSat-1 Technical Mentor at Auburn University is requesting telemetry reception reports from amateur satellite operators after a new operating mode is commanded aboard

the satellite.

AubieSat-1 was launched from Vandenberg AFB, California in October, 2011. The cubesat is an undergraduate built satellite developed by Auburn University. Over the weekend of June 9-11 the AubieSat-1 controllers changed the transmission mode of the satellite to increase the quantity of telemetry. The increased telemetry rate will provide data to indicate how well solar cell protection is working. It should also provide additional onboard housekeeping information.

AubieSat-1 transmits with a power of about 800 milliwatts on a frequency of 437.475 MHz. The beacon signal, along with telemetry, is sent using A1A continuous wave Morse code at 20 words per minute. Additional telemetry from the onboard science experiment will use CW transmissions up to 60 WPM.

Please post your reception reports on the AMSAT-BB.

An example of receiving the AubieSat-1 downlink can be found on the DK3WN SatBlog: http://www.dk3wn.info/p/?p=23582

[ANS thanks John Klingelhoeffer, WB4LNM for the above information]

ARRL 9 cm Band Plan Updated

Outside of ITU Region 1, the Amateur Satellite Service has a 9cm band allocation of 3.400 GHz - 3.410 GHz on a non-interfering basis. No current satellites are active on this frequency range at present. The new band plan reserves allocations for EME and amateur satellite operation.

The detailed graphic of the 9 cm band plan and accompanying article is posted on the ARRL web at:
http://www.arrl.org/news/arrl-board-of-directors-approves-9-cm-band-plan

In ARRL Bulletin 14 ARLB014, released on June 5 the report reads:

The ARRL Board of Directors has unanimously voted to approve the 9 cm band plan, as presented by the ARRL UHF/Microwave Band Plan Committee. Earlier this year, the committee asked radio amateurs for comments on a proposed 9 cm band plan, explaining that the purpose of these band plans is to share information about how the amateur bands are being used and to suggest compatible frequency ranges for various types of application. The committee also recognized that local conditions or needs may necessitate deviations from a band plan, and that regional frequency coordinating bodies may recommend alternatives for use in their respective regions.

The new 9 cm band plan includes the following notations:

* This band plan includes all other emission modes authorized in the 9 cm amateur band whose necessary bandwidth does not exceed the

suggested bandwidths listed.

* Weak Signal Terrestrial legacy users are encouraged to move to 3400.3-3401.0 MHz, as time and resources permit.

* Broadband segments may be used for any combination of high-speed data (e.g. 802.11 protocols), Amateur Television and other high-bandwidth activities. Division into channels and/or separation of uses within these segments may be done regionally, based on need and usage.

* Per ITU RR 5.149 from WRC-07, these band segments are also used for Radio Astronomy. Amateur use of these frequencies should be first coordinated with the National Science Foundation.

[ANS thanks the ARRL for the above information]

LVB Tracker Boxes in Stock at the AMSAT Office

Martha says she now has LVB Tracker boxes in stock at the AMSAT Office. The cost is $200 plus $20 shipping.

The AMSAT Store Website is currently down due to technical issues so you can place your order via these routes:

+ Call Martha at the AMSAT Office (301-589-6062) 10:00 AM-6:00 PM EDT
+ Fax - 301-608-3410
+ Mail - AMSAT, 850 Sligo Ave #600, Silver Spring MD 20910

The LVB Tracker is a rotator interface designed to to be used as an interface between tracking software and the Yaesu 4500/5500 series of Az/El rotators.

Here's why you want one:

+ Several physical interface options including RS-232, USB and TCP/IP over 10/100 Ethernet (tested by not implemented)

+ Uses standard EasyComm and Yaesu GS-232 protocols

+ Cross-platform compatibility - Windows, Linux, BSD, Mac

+ Compatible with existing real-time prediction programs such as SatPC32 and Nova

+ Open source

+ Integrated firmware programmer for easy installation and upgrade

Watch a demo of the LVB Track Interface with Yaesu G-5500 rotator at: http://www.youtube.com/watch?v=7ePw-ReMRwA (does not use the AMSAT enclosure)

[ANS thanks Martha at the AMSAT Ofice for the above information]

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13 Original Colonies Special Event Includes Satellite Operations

The 2012 13 Colonies Special Event stations will operate from July 1 through July 5. Operators will be on the satellites again this year for the special event.

Recognizing that the 4th comes in the middle of the week (Wednesday) and that some operators will be going to their work on the 2nd, 3rd and 5th, we will add a BONUS DAY on Saturday, 30 June 2012. Stations will operate from 09:00 AM Eastern (1300Z) right through until the 5th. Keep in mind that there may be fewer operators available on the work days so, PLEASE BE PATIENT!

Please send your QSL requests directly to each operator.

STATE	SE CALL	STATION & OPERATOR
NY	K2A	WB2OQQ Pete
VA	K2B	NL7VX Steve
RI	K2C	N1MIW Larry
CT	K2D	WA8SME Mark
DE	K2E	KB2M Jeff (SSB Birds)
DE	K2E	W3FIS Paul (FM Birds)
MD	K2F	WA3SWJ Bruce
GA	K2G	N3TL Tim
MA	K2H	KB1PVH Dave
NJ	K2I	KB2M Jeff (Here when not in DE)
NC	K2J	W4MPS Marc
NH	K2K	NE1H Bob
SC	K2L	K4YYL Art
PA	K2M	KB3WSW Elizabeth

Link to the satellite page with the list of operators and additional information: http://www.13colonies.info/Satellites.htm

The main page with all the time and date information is: http://www.13colonies.info/

[ANS thanks Dave, KB1PVH for the above information]

Field Day - Two Weeks and Counting

AMSAT Director Contests and Awards, Bruce Paige, KK5DO reminds you that Field Day is now only TWO WEEKS away!

Each year the American Radio Relay League (ARRL) sponsors Field Day as an emergency preparedness exercise. The event takes place during a 24-hour period on the fourth weekend of June. For 2012 the event takes place during a 27-hour period between 1800 UTC on Saturday, June 23, 2012 and 2100 UTC on Sunday June 24, 2012. Those who set up prior to 1800 UTC on June 23 can operate only 24 hours.

The Radio Amateur Satellite Corporation (AMSAT) promotes its own version of Field Day for operation via the amateur satellites, held concurrently with the ARRL event.

The AMSAT Field Day 2012 event is open to all Amateur Radio operators. Amateurs are to use the exchange as specified in ARRL rules for Field Day. The AMSAT competition is to encourage the use of all amateur satellites, both analog and digital.

For the complete listing of the AMSAT Field Day Rules, along with discussion of selecting the satellites to operate, please refer to the documents posted on-line at:
http://www.amsatnet.com/fd2012.doc
http://www.amsatnet.com/fd2012.pdf
Links are also accessible from http://www.amsat.org front page.

[ANS thanks AMSAT Director Contests and Awards, Bruce Paige, KK5DO for the above information]

Satellite Shorts From All Over

+ Congratulations to Jerry Brown, K5OE upon reaching his VUCC award upgrade to 1,008 grids. Jerry said his contacts ranged from 2003 on AO-40 to new grids can be attributed to "modern" rovers, including ND9M, WD9EWK, and W5PFG to new grids are credited to Yuri, UT1FG/MM.

+ Congratulations to Bob Johnson, W7LRD for earning Satellite Worked All States #326. Congratulations to Ron Oldham, N8RO for earning Satellite Worked All States #328.

+ Congratulations to Al Ward, W5LUA and Charles Hoover, K0VXM for completing a Florida (EL98) to Texas (EM13) contact on 10 GHz on June 5. This spanned a distance of 1,606.63 km, or998.357 miles (report via Dave, KB0PE)

+ Watch a NASA promotional video about the Educational Launch of Nanosatellites (ELaNa) program. A copy is posted on the AMSAT-UK web at: http://www.uk.amsat.org/8001. AMSAT's Fox-1 cubesat is a participant of this program.

+ Ib, OZ1MY noted AO-7 is once again entering eclipse periods. AO-7 will awaken in either Mode-A or Mode-B randomly upon entering the sunlit portion of its orbit. It is only operational while in sunlight. Watch, and update the status of AO-7 on the OSCAR Status page at: http://oscar.dcarr.org/

+ Follow the links at http://www.uk.amsat.org/7990 to download your free copy of SatMagazine. The June issue features the STRaND-2 nanosats on pages 25 and 26; Additionally on page 71 there is a picture of the satellite OSCAR-5 that was built by radio amateurs at the University of Melbourne, Australia.

+ AMSAT received the sad news of the passing of Chris Heijzelaar, PA5RWE. He was a very active satellite operator. Condolences can be left at: http://www.het-bar.net (via Andre, PE1RDW)

+ The ARRL posted the video of the Dayton 2012 presentation by AMSAT Vice-President Educational Relations Mark Hammond, N8MH describing the different roles and opportunities for Technical Mentors and Ground Station operators to play in an ARISS contact with the International Space Station. Watch on-line at: http://www.youtube.com/watch?feature=player_embedded&v=7z-4moV8_Xs

+ While the AMSAT on-line store is closed due to technical issues you can place an order through the AMSAT office. The hours are 10:00 AM - 6:00 PM EDT. The phone number is 301-589-6062. Martha is looking forward to hearing from you!

[ANS thanks everyone for the above information]

/EX

In addition to regular membership, AMSAT offers membership in the President's Club. Members of the President's Club, as sustaining donors to AMSAT Project Funds, will be eligible to receive additional benefits. Application forms are available from the AMSAT Office.

Primary and secondary school students are eligible for membership at one-half the standard yearly rate. Post-secondary school students enrolled in at least half time status shall be eligible for the student rate for a maximum of 6 post-secondary years in this status. Contact Martha at the AMSAT Office for additional student membership information. And with that please keep in mind when a mechanical engineer, a chemical engineer and a computer engineer were carpooling to work when the car broke down. The mechanical engineer speculated it might be a problem with the engine. The chemical engineer thought they should check the fluids. The computer engineer suggested they all get out of the car and get back in again, then see if it restarts.

73,
This week's ANS Editor,
JoAnne Maenpaa, K9JKM

89. Weekly Highlights of Solar and Geomagnetic Activity, 04 - 10 June 2012

Newsgroup: rec.radio.amateur.space
Date: 2012-06-11 15:30:06 UTC
From: SWPC.Webmaster@noaa.gov
Message-ID: <20120611153001.79C6A33C93@panix2.panix.com>
Source record: 139
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.dx,rec.radio.amateur.space,rec.radio.shortwave,rec.radio.info

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:Product: Weekly Highlights and Forecasts
:Issued: 2012 Jun 11 0626 UTC
# Prepared by the US Dept. of Commerce, NOAA, Space Weather Prediction Center
# Product description and SWPC contact on the Web
# http://www.swpc.noaa.gov/weekly.html
#
# Weekly Highlights and Forecasts
#
Highlights of Solar and Geomagnetic Activity
04 - 10 June 2012

Solar activity was at low to moderate levels during the period. Low
levels were observed at the beginning of the period with Region 1499
(N16, L=184 class/area Cao/060 on 09 June) responsible for a
majority of the C-class x-ray activity. An increase to moderate
levels was observed on 06 June as Region 1494 (S18, L=199 class/area
Cso/160 on 06 June) produced an M2/1b x-ray flare at 2006 UTC.
Associated with this event were both Type II (estimated shock speed
of 1148 km/s) and Type IV radio sweep signatures. Location of Region
1494 on 06 June and LASCO imagery suggested part of this coronal
mass ejction (CME) would be Earth directed. From 07-08 June, solar
activity returned to low levels. From 09-10 June, a return to
moderate levels was observed as new Region 1504 (S18, L=89
class/area Dai/120 on 10 June) dominated the visible disk in total
area and solar activity producing three M-class x-ray events. The
three M-class events that Region 1504 was responsible for were an
optically uncorrelated M1 event at 09/1132 UTC, the second event was
another M1/Sf at 09/1653 UTC, and finally another optically
uncorrelated M1 event on 10/0645 UTC.

No proton events were observed at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit was at
normal to high flux levels during the period. The period started at
normal background levels from 04-05 June, then at high levels for
the remainder of the period.

Geomagnetic field activity was at quiet to active levels with
isolated major storm periods observed at high latitudes. For a
majority of the summary period, Earth was under the influence of a
favorable positioned coronal hole high speed stream (CH HSS). Early
on 04 June, solar wind speeds, as measured by the ACE spacecraft,
hovered around 350 km/s. Around midday on 04 June, solar wind speeds
increased to almost 650 km/s as a CH HSS arrived. This increase in
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solar wind speeds helped drive the geomagnetic field from quiet to active levels with isolated major storm periods observed at high latitudes through 05 June. Predominantly quiet to unsettled levels prevailed from 06-09 June as effects from the CH HSS waned. A return to quiet levels was observed on 10 June as solar wind speeds returned to normal background levels. On 08 and 10 June, small changes were observed in data from the ACE spacecraft indicating the possible arrival of a weak, partially Earth-directed CMEs, however very little if any correlating activity was attributed to these arrivals.

Forecast of Solar and Geomagnetic Activity
11 June - 07 July 2012

Solar activity is expected to be at low to moderate levels from 11 June - 21 June as Region 1504 rotates across the solar disk. A return to predominantly low levels is expected for the remainder of the period.

No proton events are expected at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit is expected to be at high levels from 11-12 June, 20-25 June and then from 03 July through the end the period. Normal to background levels are expected for all other time periods.

Geomagnetic field activity is expected to be at predominantly quiet levels from 11-17 June, 21-30 June and 04 July through the end of the period. From 18-19 June and 01-03 July, quiet to active levels are expected due to the CH HSS effects.

90. WSR-163 AMSAT Weekly Satellite Report

Newsgroup: rec.radio.amateur.space
Date: 2012-06-12 13:36:33 UTC
From: JoAnne Maenpaa <k9jkm@comcast.net>
Message-ID: <001301cd48a0$598c8140$0ca583c0$@net>
Source record: 140
Cross-posted to: rec.radio.amateur.space,rec.radio.info

This report is organized into three (3) parts.
Part 1 (S1) - operational analog amateur satellites
Part 2 (S2) - operational digital amateur satellites
Part 3 (S3) - non - operational satellites

SB SAT @ AMSAT W8ISS $WSR-163.S1
WSR 163 Part 1 06/11/2012

AMSAT NEWS SERVICE BULLETIN 163.S1
FROM AMSAT HQ SILVER SPRING, MD, June 11, 2012
TO ALL RADIO AMATEURS
BID: $WSR-163.S1

PW-Sat
Catalog Number:
Launch Date: Febrauary 13, 2012
Launch Site: Kourou, French Guiana

Status: On Orbit

Uplink: 435.020 MHz FM
Downlink: 145.900 MHz DSB

Beacon:

Callsign:

URL:

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum2
[03162012]
��DO-64 Delfi-C3
Catalog number: 32789
Launch Date: April 28, 2008 0354z
Launch site: Satish Dhawan Space Centre, India

Status: Operational
Current Mode: Science Mode - Beacon ONLY

Telemetry: 145.870 MHz

Downlink: 145.880 to 145.920 MHz
Uplink: 435.530 to 435.570 MHz

Delfi-C3 web page: http://www.delfic3.nl/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnumh
[02092011]
��VO-52 HAMSAT
Catalog number: 28650
Launch Date: May 05, 2005 0444z
Launch site: Satish Dhawan Space Centre, India

Status: Operational
Current Mode: U/v - Dutch Transponder

Frequencies:
Indian Transponder:
Uplink: 435.220 to 435.280 MHz LSB/CW
Downlink: 145.930 to 145.870 MHz USB/CW

Dutch Transponder:
Uplink: 435.225 to 435.275 MHz LSB/CW
Downlink: 145.925 to 145.875 MHz USB/CW

Indian Beacon: 145.9360 MHZ CW
Dutch Beacon: 145.860 MHz 12WPM with CW message

Mode and Antenna Polarization:
V: LHCP
U: RHCP

Official Webpage: http://www.amsatindia.org/hamsat.htm

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum0

To know what transponder is switched on please listen for the beacon
that is active. Each transponder has a different beacon.
[03232012]
��SO-50 SAUDISAT-1C
Catalog number: 27607
Launch date: December 20, 2002 1700z
Launch site: Baikonur, Kazakhstan

Status: Operational

Current Mode: V/u

Uplink: 145.850 MHz FM - 67.0 Hz PL tone
Downlink: 436.795 MHz

Mode and Antenna Polarization:
V: Linear
U: Linear

Official Webpage: http://saudisat.kacst.edu.sa/index.shtml
(not up and running currently)

To switch the transmitter on, you need to send a CTCSS tone of 74.4 Hz. The order of operation is thus: (allow for Doppler as necessary):
1) Transmit on 145.850 MHz with a tone of 74.4 Hz to arm the 10 minute timer on board the spacecraft.
2) Now transmit on 145.850 MHz (FM Voice) using 67.0 Hz to PT the repeater on and off within the 10 Minute window.
3) Sending the 74.4 tone again within the 10 minute window will reset the 10 minute timer.
[02092011]
��FO-29 JAS-2
Catalog number: 24278
Launch Date: August 17, 1996

Status: Operational
Current Mode: V/u (Mode JA)

Voice/CW (Mode JA)
Uplink: 145.90 to 146.00 MHz CW/LSB
Downlink: 435.80 to 435.90 MHz CW/USB
Beacon: 435.795 MHz

Digital Mode JD
Uplinks: 145.850 MHz FM
145.870 MHz FM
145.910 MHz FM
Downlink: 435.910 MHz 1200-baud BPSK or 9600-baud FSK
Callsign: 8J1JCS
Digitalker: 435.910 MHz

Mode and Antenna Polarization:
V: RHCP
U: RHCP

For current operational schedule for FO-29:
http://www.ne.jp/asahi/m-arai/gkz/satinfo/fo29e.htm

JARL English webpage:
http://www.jarl.or.jp/English/5_Fuji/ejasmenu.htm

AMSAT-NA Webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID
�retURL�atellites/status.php

Mineo Wakita, JE9PEL, has created a simple decoder program for FO29's CW telemetry downlink: http://www.ne.jp/asahi/hamradio/je9pel/fo29cwts.htm
[01122012]
��AO-27 AMRAD
Catalog number: 22825
Launch date: September 26, 1993 0140z
Launch site: Kourou, French Guiana

Status: Operational

Current Mode: V/u

Uplink: 145.850 MHz FM
Downlink: 436.797 MHz FM

Mode and Antenna Polarization:
V: Linear
U: Linear

Official Webpage: http://www.ao27.org
[02092011]
��AO-7 AMSAT OSCAR 7
Catalog number: 07530
Launch Date: November 15, 1974
Launch site: Vandenberg AFB, California, USA

Status: Operational

Current Mode: Alternating between Mode A and B every 24 hours

Uplink: 145.850 to 145.950 MHz CW/USB Mode A
432.125 to 432.175 MHz CW/LSB Mode B
Downlink: 29.400 to 29.500 MHz CW/USB Mode A (1W PEP)
145.975 to 145.925 MHz CW/USB Mode B (8W PEP)
145.975 to 145.925 MHz CW/USB Mode C (2W PEP)
Beacons: 29.502 MHz CW
145.972 MHz CW
435.100 MHz CW
2304.100 MHz CW

Official Webpage:
http://www.amsat.org/amsat-new/satellites/sat_summary/ao7.php
[04242012]
��INTERNATIONAL SPACE STATION (ISS) - ARISS
Catalog number: 25544
Launch date: November 20, 1998 0640z (ZARYA module)
Launch sites: Baikonur, Kazakhstan
Kourou, French Guiana
Uchinoura Space Center, Japan
Kennedy Space Center, Titusville, Florida, USA

Status: Operational

Current Active Modes: FM Repeater - OFF
Voice - V/v
BBS - OFF
2m APRS - OFF
70cm APRS - ON
70cm Digi - ON
SSTV - OFF

Expedition 31 Crew (April 2012 - July 2012):
Commander: Oleg Kononenko RN3DX
Flight Engineer: Andr� Kuipers PI9ISS

Flight Engineer: Don Pettit KD5MDT
Flight Engineer: Joe Acaba KE5DAR
Flight Engineer: Gennady Padalka RN3DT
Flight Engineer: Sergei Revin RN3BS

Available Modes and Frequencies:
Digital/APRS:
Worldwide 2m packet uplink: 145.825 MHz FM 1k2
Worldwide 2m packet downlink: 145.825 Mhz FM 1k2
Worldwide 70cm packet downlink: 437.550 Mhz FM 1k2
Worldwide 70cm packet downlink: 437.550 Mhz FM 1k2

Voice:
Region 1 voice uplink: 145.200 MHz FM
Region 2/3 voice uplink: 144.490 MHz FM
Worldwide downlink: 145.800 MHz FM

Crossband Repeater:
Repeater Uplinks: 1269.650 MHz FM
437.800 MHz FM
145.990 MHz FM - 67.0 PL (Kenwood)
Repeater Downlink: 145.800 MHz FM
437.800 MHz FM (Kenwood)

SSTV Robot 36:
Downlink: 145.800 MHz FM

Mode and Antenna Polarization:
V: Linear
U: Linear

Callsigns:
Belgian: OR4ISS
German: DP0ISS
Russian: RS0ISS
RZ3DZR
United States: NA1SS
2m Packet Mailbox: RS0ISS-11
2m Digipeater alias: ARISS
70cm Packet Mailbox: RS0ISS-1
70cm Digipeater callsign: RS0ISS
70cm Digipeater alias: ARISS

Official ARISS Webpage: http://www.rac.ca/ariss
ISS Fan Club Webpage: http://www.issfanclub.com
APRS tracking page: http://www.ariss.net/

ISS Daily Crew Schedule: http://spaceflight.nasa.gov/station/timelines
Remember that the crew operates on UTC time. Also, all of the time
line is NOT translated from Russian and posted.
[06112012]
NNNN
/EX

SB SAT @ AMSAT W8ISS $WSR-163.S2
WSR 163 Part 2 06/11/2012

AMSAT NEWS SERVICE BULLETIN 163.S2
FROM AMSAT HQ SILVER SPRING, MD, June 11, 2012
TO ALL RADIO AMATEURS
BID: $WSR-163.S2

HORYU-II
Catalog number: 38340
Launch Date: May 17, 2012

Status; On Orbit

Uplink: 145.??? MHz
Downlink: 437.375 MHz CW/AX25/FSK

Beacon: 437.375 MHz CW

Callsign: JG6YBW

URL:

IARU Coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum!6
[05282012]
��XaTcobeo
Catalog Number: 38082
Launch Date: Febrauary 13, 2012
Launch Site: Kourou, French Guiana

Status: Operational

Uplink:
Downlink: 437.365 MHz FFSK with AX.25

Beacon:

Callsign:

URL:

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum5
[03162012]
��UniCubeSat
Catalog Number:
Launch Date: Febrauary 13, 2012
Launch Site: Kourou, French Guiana

Status: Operational

Uplink:
Downlink: 437.305 MHz 9k6 bps FSK

Beacon:

Callsign:

URL:

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum3
[03162012]
��Robusta
Catalog Number:
Launch Date: Febrauary 13, 2012
Launch Site: Kourou, French Guiana

Status: On Orbit

Uplink:
Downlink: 437.325 MHz 1k2 FM telemetry (data every 1 min, 20 sec. burst)

Beacon:

Callsign:

URL:

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum2
[02142012]
��MO-72 MaSat-1
Catalog Number: 38081
Launch Date: Febrauary 13, 2012
Launch Site: Kourou, French Guiana

Status: Operational

Uplink:
Downlink: 437.345 MHz GFSK 625/1250 bps
437.345 MHz CW

Beacon:

Callsign:

URL:

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum6
[03232012]
��Goliat
Catalog Number: 38085
Launch Date: Febrauary 13, 2012
Launch Site: Kourou, French Guiana

Status: Operational

Uplink:
Downlink: 437.485 MHz 1k2 AFSK

Beacon:

Callsign:

URL:

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum&#65533;
[03162012]
&#65533;&#65533;E-Star
Catalog Number: 38079
Launch Date: Febrauary 13, 2012
Launch Site: Kourou, French Guiana

Status: On Orbit

Uplink:
Downlink: 437.445 MHz 1k2 bps AFSK

Beacon:

Callsign:

URL:

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum0
[03232012]
&#65533;&#65533;ALMASat1
Catalog Number: 38078
Launch Date: Febrauary 13, 2012
Launch Site: Kourou, French Guiana

Status: On Orbit

Uplink:
Downlink: 437.465 MHz 1k2 bps FSK
2407.850 MHz

Beacon:

Callsign:

URL:

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum9
[02212012]
&#65533;&#65533;RS-39 Chibis-M
Catalog Number: 37841
Launch Date: October 30, 2011 10:11:00 UTC
Launch site: Tyuratam (Baikonur Cosmodrome), Kazakhstan

Status: Operational

Uplink:
Downlink:

Beacon: 435.315 MHz CW
435.215 MHz CW

Callsign:

URL:

IARU coordination status page:
[01122012]
��JUNGU
Catalog Number: 37841
Launch Date: October 12, 2011 05:30:00 UTC
Launch site: Satish Dhawan Space Centre, India

Status: On Orbit

Uplink: 145.??? MHz 1k2 (mode?)
Downlink: 437.505 MHz 9k6 (mode?)

Beacon: 437.275 MHz 15 wpm (?) CW

Callsign:

URL: http://www.iitk.ac.in/me/jugnu/index.htm

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum0
[01122012]
��SRMSAT
Catalog Number: 37839
Launch Date: October 12, 2011 05:30:00 UTC
Launch site: Satish Dhawan Space Centre, India

Status: On Orbit

Uplink: 145.900 MHz 1k AX.25 (speed?)
Downlink: 437.500 MHz 2k4 AX.25

Beacon: 437.425 MHz 12 wpm CW

Callsign:

URL: http://srmsat.in/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum1
[01122012]
��HRBE (E1P Explorer 1 [Prime] CubeSat (E1P-U2))
Catalog Number: 37855
Launch Date: October 28, 2011
Launch site: Vandenberg Air Force Base, California, USA

Status: On Orbit

Uplink: 437.305 MHz (???)
Downlink: 437.505 MHz AX.25 (SSB?)

Beacon:

Callsign:

URL: http://ssel.montana.edu/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum6
[01122012]
��M-Cubed
Catalog Number: 37855
Launch Date: October 28, 2011
Launch site: Vandenberg Air Force Base, California, USA

Status: On Orbit

Uplink:
Downlink: 437.485 MHz AX.25

Beacon:

Callsign:

URL: http://umcubed.org/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum!5
[01122012]
��RAX-2
Catalog Number: 37853
Launch Date: October 28, 2011
Launch site: Vandenberg Air Force Base, California, USA

Status: Operational

Uplink:
Downlink: 437.345MHz 9k6 GMSK

Beacon:

Callsign:

URL: http://rax.engin.umich.edu//

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum"1
[03232012]
��AO-71 AubieSat-1
Catalog Number: 37854
Launch Date: October 28, 2011
Launch site: Vandenberg Air Force Base, California, USA

Status: On Orbit

Uplink:
Downlink: 437.475 MHz 1k2 AX.25

Beacon: 437.475 MHz CW

Callsign: KI4NQO

URL: http://www.space.auburn.edu/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum8
[12262011]
��O/OREOS
Catalog Number: 37224
Launch Date: November 20, 2010
Launch site: Kodiak Launch Complex, Alaska, USA

Status: On Orbit

Uplink:
Downlink: 437.035 MHZ AX.25

Beacon:

Callsign:

URL: http://www.ooreos.org/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum6
[02092011]
��Rax-1 Radio Aurora Explorer
Catalog Number: 37223
Launch Date: November 20, 2010
Launch site: Kodiak Launch Complex, Alaska, USA

Status: On Orbit

Uplink:
Downlink: 437.505 MHz 9k6 GMSK

Beacon:

Callsign: RAX-1

URL: http://rax.engin.umich.edu/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum5
[02092011]
��FO-69 Fastrac-1 Sara Lily
Catalog Number: 37227
Launch Date: November 20, 2010
Launch site: Kodiak Launch Complex, Alaska, USA

Status: Operational

Uplink 1: 145.980 MHz 1k2 baud
Uplink 2: 145.825 MHz 1k2 baud
Downlink: 437.345 MHz 1k2 and 9k6 baud

Beacon: 437.435 MHz 1k2 AX.25

Callsign: Fast1

URL: http://fastrac.ae.utexas.edu/index.php

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=
[07052011]
==FO-70 Fastrac-2 Emma
Catalog Number: 37380
Launch Date: November 20, 2010
Launch site: Kodiak Launch Complex, Alaska, USA

Status: Operational

Uplink 1: 435.025 MHz 1k2 baud
Uplink 2: 437.435 MHz 9k6 baud
Downlink: 145.825 MHz 1k2 and 9k6 baud

Beacon: 145.825 MHz 1k2 AX.25

Callsign: Fast2

URL: http://fastrac.ae.utexas.edu/index.php

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=
[12162011]
==StudSat
Catalog Number: 36796
Launch Date: July 12, 2010 0352z
Launch site: Satish Dhawan Space Centre, India

Status: On Orbit

Uplink: 437.505MHz, 9600bps FSK
Downlink: 437.505MHz, 9600bps FSK
Beacon : 437.505MHz, 20bps ASK

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum4
[02092011]
==TIsat-1
Catalog Number: 36799
Launch Date: July 12, 2010 0352z
Launch site: Satish Dhawan Space Centre, India

Status: On orbit

Callsign: HB9DE

Uplink: 145.980MHz FM, AFSK
Downlink: 437.305MHz FM, AFSK
Beacon: 437.305MHz CW

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum8
[02092011]
��SwissCube
Catalog Number: 35932
Launch Date: September 23, 2009 0621z
Launch site: Satish Dhawan Space Centre, India

Status: Operational

Callsign: HB9EG

Beacon(100mw): 437.5050MHz CW
Beacon(1w): 437.5050MHz FSK 1k2bps

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum9
[02092011]
��UWE-2
Catalog Number: 35934
Launch Date: September 23, 2009 0621z
Launch site: Satish Dhawan Space Centre, India

Status: In Orbit

Beacon(500mw): 437.3850 MHz AFSK 1k2bps
437.3850 MHz FSK 9k6bps

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum0
[02092011]
��ITUpsAT1
Catalog Number: 35935
Launch Date: September 23, 2009 0621z
Launch site: Satish Dhawan Space Centre, India

Status: Operational

Beacon(100mw): 437.325MHz CW
Beacon(1w): 437.325MHz 19k2bps

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum3
[02092011]
��BEESAT
Catalog Number: 35933
Launch Date: September 23, 2009 0621z
Launch site: Satish Dhawan Space Centre, India

Status: Operational

Callsign: DP0BEE

Beacon(100mw): 436.000MHz CW
Beacon(500mw): 436.000MHz GMSK 4k8bps
Beacon(500mw): 436.000MHz GMSK 9k6bp
[02092011]
��CP-6
Catalog Number: 35004
Launch Date: May 19, 2009 2355z
Launch site: Wallops Island, Virginia, USA

Status: Operational

Downlink: 437.365 MHz 1k2 AFSK

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum1
[01122012]
��HAWKSAT 1
Catalog number: 35003
Launch Date: May 19, 2009 2355z
Launch site: Wallops Island, Virginia, USA

Status: operational

Downlink: 437.345 MHz ?

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum5
[01122012]
��Pharmasat
Catalog Number: 35002
Launch Date: May 19, 2009 2355z
Launch site: Wallops Island, Virginia, USA

Status: Operational

Downlink: 437.465 MHz 1k2 AFSK

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum�
[02092011]
��ANUSAT
Catalog Number: 34808
Launch Date: April 20, 2009 0115z
Launch Site: Satish Dhawan Space Centre, India

Status: ?

Downlink: 435.000 MHz
Uplink: 145.800 MHz

Telemetry: 137.400 MHz
[02092011]
��SOHLA-1 (ASTRO TECH.)

Catalog Number: 33496
Launch Date: January 23, 2009 0354z
Launch site: Tanegashima Space Center, Japan

Status: Operational

Proposed Frequencies and Modes:
Downlink: 437.505 MHz AFSK/CW
Beacon: 437.505 MHz AFSK/CW

Callsign:

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum1
[02092011]
��KAGAYAKI (Solan Co.)
Catalog Number: 33495
Launch Date: January 23, 2009 0354z
Launch site: Tanegashima Space Center, Japan

Status: In Orbit

Downlink: 437.375 MHZ FSK9k6/CW
Beacon: 437.375 MHz FSK9k6/CW

IARU coordination status page:

AMSAT-NA webpage:

[02092011]
��STARS (Kagawa Univ.) (Twin Satellites)
Catalog Number: 33498
Launch Date: January 23, 2009 0354z
Launch site: Tanegashima Space Center, Japan

Status: Operational ?

Downlinks: 437.485 MHz FM/CW
437.465 MHz FM/CW
Beacons: 437.305 MHz FM/CW
437.275 MHz FM/CW

Callsigns: JR5YBN
JR5YBO

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum�

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID1&retURL
�atellites/status.php
[02092011]
��KKS-1 (Tokyo MCIT)
Catalog Number: 33499

Launch Date: January 23, 2009 0354z
Launch site: Tanegashima Space Center, Japan

Status: Operational

Downlink: 437.455 MHz AFSK/CW
Beacon: 437.385 MHz AFSK/CW

Callsign: JQ1YYY

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum7

AMSAT-NA webapge:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID0&retURL
�atellites/status.php
[20092011]
��PRISM (Tokyo Univ.)
Catalog Number: 33493
Launch Date: January 23, 2009 0354z
Launch site: Tanegashima Space Center, Japan

Status: Operational ?

Downlink: 437.425 MHz AFSK/GMSK/CW
Beacon: 437.250 MHz AFSK/GMSK/CW

Callsign: JQ1YCX

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum�

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID9&retURL
�atellites/status.php
[02092011]
��RS-30 Radio Sputnik 30 (Yubileiny)
Catalog Number: 32953
Launch Date: May 23, 2008 1520z
Launch site: Plesetsk Missile and Space Complex, Russia

Status: Operational

Curent Modes: Telemetry
Audio
Images

Downlinks: 435.315 MHz
435.215 MHz

AMSAT-NA website:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID5&ret
URL�atellites/status.php

Official website:
http://www.npopm.com/?cid&#65533;oca&caidC
[02092011]
&#65533;&#65533;CanX-2
Catalog number: 32790
Launch Date: April 28, 2008 0354z
Launch site: Satish Dhawan Space Centre, India

Status: Operational in range of ground station only

Downlink: 437.478 MHz GFSK

For the latest project status update please visit the Can X-2 web
page: http://www.utias-sfl.net/nanosatellites/CanX2/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnumF
[02092011]
&#65533;&#65533;AAUSAT-II
Catalog number: 32788
Launch Date: April 28, 2008 0354z
Launch site: Satish Dhawan Space Centre, India

Status: Operational

Downlink: 437.425 MHz 1k2 baud packet

For the latest project status update please visit the AAUSAT-II web
page:
http://www.aausatii.aau.dk/homepage/index.php?language&#65533;&page&#65533;me

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum`
[02092011]
&#65533;&#65533;CO-65 CUTE-1.7+APD II
Catalog number: 32785
Launch Date: April 28, 2008 0354z
Launch site: Satish Dhawan Space Centre, India

Status: Operational

Downlink: 437.475 MHz 9k6 Packet
Uplink: 1267.600 Mhz

Telemetry Beacon:
Downlink: 437.2750 MHz CW

For the latest project status update please visit the Cute-1.7+APD II
web page: http://lss.mes.titech.ac.jp/ssp/cute1.7/index_e.html

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnumx

Command Station blog website:
http://lss.mes.titech.ac.jp/ssp/cute1.7/blog/

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID2&retURL
=atellites/status.php
[03232012]
==Compass-1
Catalog number: 32787
Launch Date: April 28, 2008 0354z
Launch site: Satish Dhawan Space Centre, India

Status: Operational

Current Mode: dependant on last received command

Uplink: 145.980 MHz FM
Downlink: 437.275 Mhz CW
437.405 MHz Packet

For the latest project status update please visit the Compass 1 web
page: http://www.raumfahrt.fh-aachen.de/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnumR

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID4&retURL
=atellites/status.php
[06162011]
==CO-66 Seeds II
Catalog number:
Launch Date: April 28, 2008 0354z
Launch site: Satish Dhawan Space Centre, India

Status: Operational

Downlink: 437.485 MHz

Callsign: JQ1YGU

For the latest project status update please visit the Seeds 2 web
page: http://cubesat.aero.cst.nihon-u.ac.jp/english/seeds_2_e.html

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum6

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID3&retURL
=atellites/status.php
[02092011]
==CAPE-1
Catalog Number: 31130
Launch Date: April 17,2007 0702z
Launch site: Baikonur, Kazakhstan

Status: Intermittent

Current Mode: /u

TLM Downlink: 435.245 MHz 9600 bs FSK AX.25
CW Beacon: 435.245 MHz CW

Callsign: K5USL

TLM and CW interchange every 30 seconds.

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID&retURL
/satellites/status.php

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnumr
[02092011]
CP3
Catalog Number: 31129
Launch Date: April 17,2007 0702z
Launch site: Baikonur, Kazakhstan

Status: Operational

Current Mode: /u

Downlink: 436.845 MHz 1200 bps AFSK AX.25

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnumt
[02092011]
CO-58 CubeSat XI-V
Catalog number: 28895
Launch Date: October 27, 2005 0652z
Launch site: Plesetsk Missile and Space Complex, Russia

Status: Operational - CW Beacon only

Current Mode: /u

Telemetry Downlink: 437.4250 MHz AFSK 1200bps using AFK protocol
Beacon: 437.2750 MHz CW

Callsign: JQ1YGW

Official Webpage: http://www.space.t.u-tokyo.ac.jp/cubesat/mission/V/

Pictures received by Mineo Wakita - JE9PEL:
http://www.ne.jp/asahi/hamradio/je9pel/xivpicte.htm

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum7
[02092011]
CO-57 CubeSat XI-IV
Catalog number: 27848
Launch date: June 30, 2003 1415z
Launch site: Plesetsk Missile and Space Complex, Russia

Status: ?????

Current Mode: /u

Beacon: 436.8475 MHz CW
Telemetry : 437.4900 MHz AFSK 1200 BPS

Callsign: JQ1YGW

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID&#65533;&retURL
&#65533;atellites/status.php

Official Webpage: http://www.space.t.u-tokyo.ac.jp/cubesat/mission/V/
[02092011]
&#65533;&#65533;QuakeSat
Catalog Number: 27845
Launch Date: June 30, 2003 1415z
Launch site: Plesetsk Missile and Space Complex, Russia

Status: Telemetry only

Current Mode: 9600 baud data packet

Mode U packet
Downlink: 436.675 MHz 9k6 BPS

Quakesat webpage:
http://www.quakefinder.com/services/quakesat-ssite/
[02252011]
&#65533;&#65533;CO-55 Cute-1.7+APD II
Catalog Number: 27844
Launch date: June 30, 2003 1415z
Launch site: Plesetsk Missile and Space Complex, Russia

Status: Operational

Current Mode: CW downlink worldwide
AX25 Packet with uplink command over Japan only

Mode U Telemetry
Downlink: 437.4000 MHz AFSK 1200 BPS

Mode U TLM Beacon
Downlink: 436.8375 MHz CW

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satIDi&retURL
&#65533;atellites/status.php

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnumx
[02092011]
&#65533;&#65533;NO-44 PCSAT
Catalog number: 26931

Launch Date: September 30, 2001 0240z
Launch site: Kodiak Launch Complex, Alaska, USA

Status: Telemetry only

Current Mode: V/v

General Usage Uplink/Downlink: 145.827 MHz 1200 Baud
Special Usage Downlink: 144.390 Mhz 1200 Baud

PCSAT APRS page: http://pcsat.aprs.org

aprstlm Telemetry Decoder program:
http://www.xciv.org/~iain/aprstlm/v1.2/
[02092011]
��RS-22 RADIO SPORT 22 (MOZHAYETS 4)
Catalog number: 27939
Launch Date: September 27, 2003 0612z
Launch site: Plesetsk Missile and Space Complex, Russia

Status: Operational - 70cm cw only

Current Mode: /u

CW Beacon - 435.352 MHz
145.818 MHz

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satIDv&retURL
�atellites/status.php
[02092011]
��LO-19 LUSAT
Catalog number: 20442
Launch date: January 22, 1990
Launch site: Kourou, French Guiana

Status: CW Beacon only

Uplinks: 145.840 MHz 1200-baud Manchester FSK
145.860 MHz 1200-baud Manchester FSK
145.880 MHz 1200-baud Manchester FSK
145.900 MHz 1200-baud Manchester FSK

CW downlink: 437.125 MHz

Digital downlink: 437.150 MHz SSB (RC-BPSK 1200-baud PSK)

Broadcast Callsign: LUSAT-11
BBS: LUSAT-12

General information and telemetry samples can be found at:
www.telecable.es/personales/ea1bcu
[02092011]
��UO-11 OSCAR-11

Catalog number: 14781
Launch Date: March 1, 1984
Launch site: Vandenburg AFB, California, USA

Status: Operational ?

Current Mode: /v

Telemetry Downlink: 145.825 MHz FM 1200 AFSK
UHFBeacon: 435.025 MHz
Mode-S Beacon: 2401.500 MHz

Mode and Antenna Polarization:
V: RHCP
S: LHCP

Webpage: http://www.users.zetnet.co.uk/clivew/
MPEG3 files: http://www.ne.jp/asahi/hamradio/je9pel/uo11tlme.htm
[07052011]
��INTERNATIONAL SPACE STATION (ISS) - ARISS
Catalog number: 25544
Launch date: November 20, 1998 0640z (ZARYA module)
Launch sites: Baikonur, Kazakhstan
Kourou, French Guiana
Uchinoura Space Center, Japan
Kennedy Space Center, Titusville, Florida, USA

Status: Operational

Current Active Modes: FM Repeater - OFF
Voice - V/v
BBS - OFF
2m APRS - OFF
70cm APRS - ON
70cm Digi - ON
SSTV - OFF

Expedition 31 Crew (April 2012 - July 2012):
Commander: Oleg Kononenko RN3DX
Flight Engineer: Andr� Kuipers PI9ISS
Flight Engineer: Don Pettit KD5MDT
Flight Engineer: Joe Acaba KE5DAR
Flight Engineer: Gennady Padalka RN3DT
Flight Engineer: Sergei Revin RN3BS

Available Modes and Frequencies:
Digital/APRS:
Worldwide 2m packet uplink: 145.825 MHz FM 1k2
Worldwide 2m packet downlink: 145.825 Mhz FM 1k2
Worldwide 70cm packet downlink: 437.550 Mhz FM 1k2
Worldwide 70cm packet downlink: 437.550 Mhz FM 1k2

Voice:
Region 1 voice uplink: 145.200 MHz FM
Region 2/3 voice uplink: 144.490 MHz FM
Worldwide downlink: 145.800 MHz FM

Crossband Repeater:
Repeater Uplinks: 1269.650 MHz FM
437.800 MHz FM
145.990 MHz FM - 67.0 PL (Kenwood)
Repeater Downlink: 145.800 MHz FM
437.800 MHz FM (Kenwood)

SSTV Robot 36:
Downlink: 145.800 MHz FM

Mode and Antenna Polarization:
V: Linear
U: Linear

Callsigns:
Belgian: OR4ISS
German: DP0ISS
Russian: RS0ISS
RZ3DZR
United States: NA1SS
2m Packet Mailbox: RS0ISS-11
2m Digipeater alias: ARISS
70cm Packet Mailbox: RS0ISS-1
70cm Digipeater callsign: RS0ISS
70cm Digipeater alias: ARISS

Official ARISS Webpage: http://www.rac.ca/ariss
ISS Fan Club Webpage: http://www.issfanclub.com
APRS tracking page: http://www.ariss.net/

ISS Daily Crew Schedule: http://spaceflight.nasa.gov/station/timelines
Remember that the crew operates on UTC time. Also, all of the time
line is NOT translated from Russian and posted.
[06112012]
NNNN
/EX

SB SAT @ AMSAT W8ISS $WSR-163.S3
WSR 163 Part 3 06/11/2012

AMSAT NEWS SERVICE BULLETIN 163.S3
FROM AMSAT HQ SILVER SPRING, MD, June 11, 2012
TO ALL RADIO AMATEURS
BID: $WSR-163.S3

THE FOLLOWING ARE IN ORBIT BUT ARE NON-OPERATIONAL AT THIS TIME:

NANOSAIL-D
Catalog Number: 37361(?)

Ejection Date: January 17, 2011

Status: Non - Operational

Downlink: 437.270 MHz AX.25

URL: http://nanosaild.engr.scu.edu/dashboard.htm

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum5
[04302012]
��HO-68 HOPE-1 (CAS-1)(XW-1)
Catalog Number: 36122
Launch Date: December 15, 2009 0231z
Launch site: Taiyuan Space Center, PRC

Status: Telemetry only

Callsign:
Broadcast: BJ1SA-11
BBS: BJ1SA-12

Uplinks: 145.8250 MHz FM, PL 67.0 Hz.
145.9250 - 145.9750 MHz SSB/CW
145.8250 MHz AFSK 1200 BPS
Downlinks: 435.6750 MHz FM
435.7650 - 435.7150 MHz SSB/CW
435.6750 MHz AFSK 1200 BPS

Beacon: 435.7900 MHz CW

Mode and Antenna Polarization:
V: LHCP 2.0dBi max
U: RHCP 3.0dBi max

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum8

For more information about XW-1 (CAS-1):
http://
[04302012]
��SO-67 SumbandilaSat
Catalog Number: 35870
Launch Date: September 17, 2009 1555z
Launch site: Baikonur, Kazakhstan

Status: Non - Operational

Callsign: ZS0SUM

Uplink: 145.875MHz FM tone 233.6 Hz
Downlink: 435.345MHz FM

Mode and Antenna Polarization:
V: Linear

U: Linear

For more information about SO-67:
http://www.amsatsa.org.za/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum&#65533;
[01272012]
&#65533;&#65533;CP4
Catalog Number: 31132
Launch Date: April 17, 2007

Status: Non-Operational

Current Mode: /u

TLM Downlink: 437.325 MHz 1200 bps FSK AX.25
CW Beacon: 437.325 MHz CW

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnumy
[09062010]
&#65533;&#65533;LIBERTAD-1
Catalog Number: 31128
Launch Date: April 17, 2007

Status: Non-Operational

Current Mode: V/u APRS Packet ax25

Callsign: 5K3L

Uplink: 145.825 MHz 1200 AFSK ax25 APRS
Downlink: 437.399 MHz 1200 AFSK ax25 APRS

Telemetry Beacon: 437.4050 MHz 1200 AFSK ax25

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnumv
[09062010]
&#65533;&#65533;PO-63 PEHUENSAT-1
Catalog Number: 29712
Launch Date: January 10, 2007

Status: Non-Operational

Current Mode: V/v

Uplink/Downlink: 145.825 Mhz FM
Voice Recorder: 145.825 Mhz FM

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnumQ
[09062010]
&#65533;&#65533;NCUBE-2

Catalog number: 28897
Launch Date: October 27, 2005

Status: Still attached to XO-53 (SSETI)?

Proposed Callsign: TBA
Proposed Transmit Frequency: 437.305
2407.250

Official Website: http://www.ncube.no

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum$
[09062010]
��XO-53 SSETI
Catalog number: 28894
Launch Date: October 27, 2005

Status: Non-operational

Voice Uplink: 437.250 MHz FM 67Hz CTCSS
Voice Downlink: 2401.835 MHz FM
Packet Up/Downlink: 437.250 MHz 9k6 packet
Packet Downlink 2401.835 MHz 38k4 packet

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnumT
[09062010]
��UWE-1
Catalog Number: 28892
Launch Date: October 27, 2005

Status: Non-Operational

Mode U Telemetry
Downlink: 437.5050 MHz 9600 AFSK

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnumS
[09062010]
��AO-51 ECHO
Catalog number: 28375
Launch date: June 29, 2004 0745z
Launch site: Baikonur, Kazakhstan

Status: Non - Operational

Current Mode(s):
Voice repeater: V/u
Uplink: 145.880 MHz FM
Downlink: 435.150 MHz FM

Telemetry: Recovery efforts
Downlink: 435.150MHz 9k6

Analog voice downlink: 435.300 MHz FM
435.150 MHz FM
2401.200 Mhz FM
Analog voice uplink: 145.860 MHZ FM
145.880 MHz USB
145.880 MHz FM
145.920 MHz FM
145.920 MHz FM - 67 Hz PL tone burst
1268.705 MHz FM
Digital Downlinks: 435.150 MHz FM 38k4 PBP, 1 watt output
435.150 MHz FM 9k6 Pacsat Broadcast Protocol
2401.200 MHz FM 38k4 bps, AX.25
Digital Uplink: 145.860 MHz FM 9k6 Pacsat Broadcast Protocol
1268.703 mhz FM 9k6 Pacsat Broadcast Protocol
Beacon: 435.150 MHz

Mode and Antenna Polarization:
T: Linear
V: Linear
U: TX A (usually digital)LHCP
TX B (usually analog) RHCP
L: Linear
S: Linear

Broadcast: PECHO-11
BBS: PECHO-12

Official Webpage: http://www.amsat.org/amsat-new/echo/CTNews.php

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum
[12062011]
��CANX-1
Catalog Number: 27847
Launch Date: June 30, 2003

Status: Non-Operational

Downlink: 437.8800 MHz AFSK 1k2bps
[06052009]
��DTUSAT
Catalog Number: 27842
Launch Date: June 30, 2003

Status: Non-Operational

Current Mode: 2k4 AFSK Packet last reported

Downlink: 437.475MHz

Officail webpage: http://dtusat1.dtusat.dtu.dk/

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID1&retURL

�tellites/all_oscars.php
[02212009]
��AO-49 AATiS OSCAR-49 (SAFIR-M)
Catalog number: 27605
Launch Date: December 20, 2002

Status: Non-operational.

Uplink: 435.275 MHz 1200-baud AFSK
Downlink: 145.825 MHz 9600-baud FSK
(optional voice message)

Broadcast callsign: DP0AIS

Official webpage: http://amend.gmxhome.de
[01222007]
��MO-46 TIUNGSAT-1
Catalog number: 26548
Launch date: September 26, 2000

Status: Telemetry only

Uplinks: 145.850 MHz
145.925 MHz 9600-baud FSK
Downlink: 437.325 MHz

Broadcast callsign: MYSAT3-11
BBS: MYSAT3-12

TiungSat-1 is Malaysia's first micro-satellite and in addition to
commercial land and weather imaging payloads offers FM and FSK
Amateur Radio communication.

TiungSat-1, named after the mynah bird of Malaysia, was developed as
a collaborative effort between the Malaysian government and Surrey
Satellite Technology Ltd.
[03302009]
��NO-45 SAPPHIRE
Catalog number: 26932
Launch Date: September 30, 2001

Status: Non-Operational

Downlink: 437.095 MHz 1200 baud AX-25 AFSK
Uplink: 145.945 MHz UI Digipeater
Digi Callsign: KE6QMD

Everyone is welcome to use the digipeating/APRS features of Sapphire,
as per the user service agreement located at the following URL:
http://web.usna.navy.mil/~bruninga/pcsat/contract.txt
[03132005]
��SO-42 SAUDISAT-1B
Catalog number: 26549

Launch date: September 26, 2000

Status: Non-Operational

Downlink: 437.075 MHz

Broadcast Callsign: SASAT2-11
BBS: SASAT2-12

Further information is available at:
http://www.amsat.org/amsat/sats/n7hpr/so42.html
[01222007]
��SO-41 SAUDISAT-1A
Catalog number: 26545
Launch Date: September 26, 2000

Status: Non-Operational

Uplink: 145.850 MHz
Downlink: 436.775 MHz

Broadcast Callsign: SASAT1-11
BBS: SASAT1-12

Further information is available at:
http://www.amsat.org/amsat/sats/n7hpr/so41.html
[01222007]
��AO-40 AMSAT OSCAR 40
Catalog number: 26609
Launch Date: November 16, 2000

Status: Non-Operational

Uplinks

V-band: 145.840 - 145.990 MHz CW/LSB
U-band: 435.550 - 435.800 MHz CW/LSB
L1-band: 1269.250 - 1269.500 MHz CW/LSB
L2-band: 1268.325 - 1268.575 MHz CW/LSB

Downlinks

S2-band: 2401.225 - 2401.475 MHz CW/USB
K-band: 24048.010 - 24048.060 MHz CW/USB
Beacon: 2401.323 MHz
24048.035 MHz

P3-D Telemetry Beacons (IHU)

BEACON General Beacon(GB) Middle Beacon(MB) Engineering Beacon(EB)
2 m none 145.898 MHz none
70cm 435.438 MHz 435.588 MHz 435.838 MHz
13cm(1) 2400.188 MHz 2400.338 MHz 2400.588 MHz

13cm(2) 2401.173 MHz 2401.323 MHz 2401.573 MHz
3cm 10450.975 MHz 10451.125 MHz 10451.375 MHz
1.5cm 24047.885 MHz 24048.035 MHz 24048.285 MHz
[07162007]
��OO-38 OPAL
Catalog Number: 26063
Launch Date: January 27, 2000

Status: Non-Operational

Mode U TLM Beacon
Downlink: 437.1000 MHz 9600 FSK
[08132007]
��UO-36 UoSAT-12
Catalog number: 25693
Launch date: April 21, 1999

Status: Unknown

Uplink: 145.960 MHz (9600-baud FSK)
Downlinks: 437.025 MHz
437.400 MHz

Broadcast Callsign: UO121-11
BBS: UO121-12

The VK5HI viewer shareware for UO-36 is available on the AMSAT-NA web
site at the following URL:
ftp://ftp.amsat.org/amsat/software/win32/display/ccddsp97-119.zip
[01222007]
��SO-35 SUNSAT
Catalog Number: 25636
Launch date:February 23, 1999

Status: Non-Operational

Downlink: Mode B Repeater: 436.291 MHz
Mode J Digipeater: 436.250 MHz

Uplinks: Mode B Repeater: 145.825 MHz
Mode J Digipeater: 145.825 MHz
145.900 MHz

For more information of SUNSAT vist the satellite web site:
http://esl.ee.sun.ac.za/projects/sunsat/
[01222007]
��PO-34 PANSAT
Catalog number: 25520
Launch date: October 30, 1998

Status: Telemetry downloads only

Uplink/downlink: 436.500 MHz

Official Webpage: http://www.sp.nps.navy.mil/pansat/
[05092004]
��SO-33 SEDSAT-1
Catalog number: 25509
Launch date: October 24, 1998

Status: Semi-operational

Downlink: 437.910 MHz FM (9600-baud FSK)

The satellite is not currently available for uplink transmissions and
the image and transponder recovery efforts have been unsuccessful.

For more information on SedSat-1 visit the satellite web site:
http://seds.uah.edu/projects/sedsat/sedsat.htm
[09042006]
��GO-32 Gurwin TechSat-1B
Catalog number: 25397
Launch Date: July 10, 1998

Status: Non-Operational

Current Modes:
Telemetry : /u

Downlink: 435.225 MHz FM (9600-baud FSK)
435.325 Mhz - Not Available - temperature problems
Uplinks: 145.850 FM
145.890 FM
145.930 FM
1269.700 FM
1269.800 FM
1269.900 FM

Broadcast Callsign: 4XTECH-11
BBS Callsign: 4XTECH-12

More information of GO-32 can be found at:
http://asri.technion.ac.il/techsat/

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID&retURL
�atellites/status.php
[07172010]
��TO-31 TMSAT-1
Catalog number: 25396
Launch Date: July 10, 1998

Status: Non-operational

Uplink: 145.925 MHz 9600 baud FSK
Downlink: 436.925 MHz 9600 baud FSK

Broadcast callsign: TMSAT1-11
BBS: TMSAT1-12

[05012006]
��MO-30 UNAMSAT-2
Catalog Number: 24305
Launch Date: September 5, 1996

Status: Non-operational

Downlink: 435.1380 MHz AFSK 1200 BPS
Downlink: 435.2060 MHz AFSK 1200 BPS
Uplink: 145.8150 MHz AFSK 1200 BPS
Uplink: 145.8350 MHz AFSK 1200 BPS
Uplink: 145.8550 MHz AFSK 1200 BPS
Uplink: 145.8750 MHz AFSK 1200 BPS
[06042009]
��PO-28 POSAT-1
Catalog number: 22829
Launch Date: September 25, 1993

Status: Non-operational

Downlink: 429.950
Uplink: Not until handover back to Amatuer usage

Broadcast callsign: POSAT1-11
BBS callsign: POSAT1-12

AMSAT Webpage: http://www.amsat.org/amsat/sats/n7hpr/po28.html
POSAT-1 webpage:
http://www.ee.surrey.ac.uk/SSC/CSER/UOSAT/missions/posat1.html
[01012009]
��IO-26 ITAMSAT
Catalog number: 22826
Launch Date: September 26, 1993

Status: PSK carrier only

Current Mode:

Uplinks: 145.875 MHz FM 1200-baud
145.900 MHz FM 1200-baud
145.925 MHz FM 1200-baud
145.950 MHz FM 1200-baud

Downlink: 435.808 MHz PSK

Broadcast Callsign: ITMSAT-11
BBS: ITMSAT-12

Official webpage: http://www.itamsat.org
AMSAT Webpage: http://www.amsat.org/amsat/sats/n7hpr/io26.html
[01212007]
��KO-25 KITSAT
Catalog number: 22828

Launch date: September 26, 1993

Status: Non-operational

Uplink: 145.980 MHz FM 9600-baud FSK
Downlink: 436.500 MHz FM

Broadcast Callsign: HL02-11
BBS: HL02-12
[05092004]
��AO-24 ARSENE
Catalog Number: 22654
Launch Date: May 13, 1993

Status: Non-operational

Uplink: 435.0625 MHz FM 1k2bps AFSK
435.1125 MHz FM 1k2bps AFSK
435.1375 MHz FM 1k2bps AFSK
Downlink: 145.9750 MHz FM 1k2bps AFSK
2446.5025 MHz FM 1k2bps AFSK

Beacon: 2446.4700 MHz CW

Broadcast callsign:
BBS:
[12162009]
��KO-23 KITSAT
Catalog number: 22077
Launch date: August 10, 1992

Status: Non-operational

Uplink: 145.900 MHz FM (9600-baud FSK)
Downlink: 435.170 MHz FM

Broadcast Callsign: HLO1-11
BBS: HLO1-12
[01222007]
��UO-22 UOSAT
Catalog number: 21575
Launch date: July 17, 1991

Status: Non-Operational

Uplink: 145.900 FM 9600-baud FSK
Downlink: 435.120 MHz FM

Broadcast Callsign: UOSAT5-11
BBS: UOSAT5-12
[01222007]
��AO-21 AMSAT-OSCAR 21
Catalog Number: 21087
Launch Date: January 29, 1991

Status: Non-Operational

Uplink: 435.041 MHz FM DSP
Downlink: 145.983 MHz FM DSP
[01222007]
��FO-20 JAS-1b
Catalog number: 20480
Launch Date: February 07, 1990

Status: Non-Operational

Beacons: 435.795 MHz CW
435.910 MHz AX25

Voice Transponder:
Uplink: 145.900 to 146.000 MHz CW/LSB
Downlink: 435.800 to 435.900 MHz CW/USB

Digital Transponder:
Uplinks: 145.850 MHz
145.870 MHz
145.890 MHz
145.910 MHz
Downlink: 435.910 MHz

More FO-20 info can be found at:
http://www.amsat.org/amsat/sats/n7hpr/fo20.html
[01152007]
��WO-18 WEBERSAT
Catalog Number: 20441
Launch Date: January 22, 1990

Status: Non-Operational

Downlink: 437.104 MHz SSB 1200 Baud PSK AX.25
[05012006]
��DO-17 Dove
Catalog Number: 20440
Launch Date: January 22, 1990

Status: Non-operational.

Downlink: 145.825 MHz FM 1200 Baud AFSK
Beacon: 2401.220 MHz
[05012006]
��AO-16 PACSAT
Catalog number: 20439
Launch Date: January 22, 1990

Status: non-operational

Current Mode: V/u

Uplink: 145.900 MHz FM 1200-baud Manchester FSK (reserved)
145.920 MHz FM VOICE

145.940 MHz FM 1200-baud Manchester FSK (reserved)
145.960 MHz FM 1200-baud Manchester FSK (reserved)

Downlink: 437.026 MHz USB VOICE
(1200-baud PSK - MBL Telemetry Only)

Mode-S Beacon: 2401.1428 MHz [NO FUTURE OPERATIONS PLANNED]

Mode and Antenna Polarization:
U: RC 437.050 MHz RHCP
PSK 437.026 MHz LHCP
V: Linear

Broadcast Callsign: PACSAT-11
BBS: PACSAT-12

AO-16 AMSAT Webpage: http://www.amsat.org/amsat/sats/n7hpr/ao16.html
[07242009]
��UO-15 UoSAT-4
Catalog Number: 20438
Launch Date: January 22, 1990

Status: Non-operational

Uplink: ?
Downlink: 435.1250MHz (?)
435.1200MHz (?)
[06042009]
��UO-14 UoSAT-3
Catalog number: 20437
Launch date: January 22, 1990

Status: Non-operational

Uplink: 145.975 MHz FM
Downlink: 435.070 MHz FM
[05092004]
��FO-12 Fuji-OSCAR 12
Catalog Number: 16909
Launch Date: August 12, 1986

Status: Non-Operational

Mode V/U (J) Linear Transponder (Inverting):
Uplink: 145.9000 - 146.0000 MHz SSB/CW
Downlink 435.8000 - 435.9000 MHz SSB/CW

Mode V/U (J) Packet:
Uplink: 145.8500 MHz MFSK 1200 BPS
Uplink: 145.8700 MHz MFSK 1200 BPS
Uplink: 145.8900 MHz MFSK 1200 BPS
Uplink: 145.9100 MHz MFSK 1200 BPS

Downlink 435.9100 MHz PSK 1200 BPS

Telemetry Beacon: 435.7950 MHz SSB/CW
[01152007]
��AO-10 OSCAR 10
Catalog number: 14129
Launch Date: June 16, 1983

Status: Non-operational

Uplink: 435.030 to 435.180 MHz CW/LSB
Downlink: 145.975 to 145.825 MHz CW/USB

Beacon: 145.810 MHz (unmodulated carrier)

W4SM has more information about the satellite at the following URL:
http://www.cstone.net/~w4sm/AO-10.html
[05092004]
��AO-8 AMSAT-OSCAR 8
Catalog Number: 10703
Launch Date: March 3, 1978

Status: Non-Operational

Mode V/U (J) Linear Transponder (Non-Inverting): Non-Operational
Uplink: 145.9000 - 146.0000 MHz SSB/CW
Downlink 435.1990 - 435.2000 MHz SSB/CW

Mode V/U (J) TLM Beacon: Non-Operational
Downlink 435.0950 MHz CW

Mode V/A (A) Linear Transponder (Non-Inverting): Non-Operational
Uplink: 145.8500 - 145.9000 MHz SSB/CW
Downlink 29.4000 - 29.5000 MHz SSB/CW

Mode V/A (A) TLM Beacon: Non-Operational
Downlink 29.4020 MHz CW
[01152007]
��AO-6 AMSAT-OSCAR 6
Catalog Number: 06236
Launch Date: October 15, 1972

Status: Non-Operational

Uplink: 145.9000 - 146.0000 MHz SSB/CW
Downlink: 29.4500 - 29.5500 MHz SSB/CW
Beacons: 29.450 MHz
435.100 MHz
[01312008]
��AO-5 Australis-OSCAR 5
Catalog Number: 04321
Launch Date: January 23, 1970

Status: Non-Operational

Telemetry Beacons: 144.0500 MHz CW
29.4500 MHz CW

[01152007]
��OSCAR III
Catalog Number: 01293
Launch Date: March 09, 1965

Status: Non-Operational

Uplink: 145.9750 - 146.0250 MHz SSB/CW
Downlink: 144.3250 - 144.3750 MHz SSB/CW
[01012007]
��RS-15 RADIO SPORT RS-15
Catalog number: 23439
Launch Date: December 26, 1994

Status: Non-operational

Uplink: 145.858 to 145.898 MHz CW/USB
Downlink: 29.354 to 29.394 MHz CW/USB

Beacon 1: 29.352 MHz (intermittent)
Beacon 2: 29.398 MHz

SSB meeting frequency: 29.380 MHz (unofficial)
[06202004]
��RS-13 RADIO SPORT RS-13
Catalog number: 21089
Launch date: February 5, 1991

Status: Non-operational

Uplink: 21.260 to 21.300 MHz CW/USB
Downlink: 145.860 to 145.900 MHz CW/USB

Beacon: 145.860 MHz

Robot: 145.908 MHz
[05232004]
��RS-12 RADIO SPORT RS-12
Catalog number: 21089
Launch date: February 5, 1991

Status: Non-operational

Uplink: 21.210 to 21.250 MHz CW/USB
Downlink: 29.410 to 29.450 MHz CW/USB

Beacon: 29.408 MHz

Robot: 29.454 MHz
[05232004]
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ANS is released worldwide via the AMSAT ANS e-mail reflector and a live radiocast on the AMSAT-NA 20-meter net held each Sunday on 14.282 MHz. Pre-net operations start at 18:00 UTC, with current ANS bulletins transmitted to the eastern U.S. at 19:00 UTC and to the western U.S. at 19:30 UTC.

Information on AMSAT-NA is available at the following URL:
http://www.amsat.org

Mailing address:
AMSAT-NA
850 Sligo Avenue, Suite 600
Silver Spring, Maryland 20910-4703

Voice: 301-589-6062
888-322-6728
FAX: 301-608-3410

Currently, AMSAT-NA supports the following (free) mailing lists:

* AMSAT News Service (ANS)
* General satellite discussion (AMSAT-BB)
* Orbit data (KEPS)
* Manned space missions (SAREX)
* District of Columbia area (AMSAT-DC)
* New England area (AMSAT-NE)
* AMSAT Educational Liaison mailing list (AMSAT-EDU)
* AMSAT K-12 Educational Liaison mailing list (AMSAT-K12)

A daily digest version is available for each list.

To subscribe, or for more list information, visit the following URL:
http://www.amsat.org/mailman/listinfo/ans

In addition to regular membership, AMSAT-NA offers membership in the President's Club. Members of the President's Club, as sustaining donors to AMSAT Project Funds, will be eligible to receive additional benefits. Application forms are available from the AMSAT-NA Office.

This week's Weekly Satellite Report Editor is James French, W8ISS.

ANS is always dedicated to past ANS editor 'BJ' Arts, WT0N, and to the memory of longtime AMSAT supporters Werner Haas, DJ5KQ, Dennis Kitchen, G0FCL and John Branegan GM4IHJ.

Please send any amateur satellite news or reports to: ans-editor{at} amsat.org
NNNN
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91. Weekly Highlights of Solar and Geomagnetic Activity, 11 - 17 June 2012

Newsgroup: rec.radio.amateur.space
Date: 2012-06-18 15:30:07 UTC
From: SWPC.Webmaster@noaa.gov
Message-ID: <20120618153001.D341433C91@panix2.panix.com>
Source record: 141
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.dx,rec.radio.amateur.space,rec.radio.shortwave,rec.radio.info

```
:Product: Weekly Highlights and Forecasts
:Issued: 2012 Jun 18 1335 UTC
# Prepared by the US Dept. of Commerce, NOAA, Space Weather Prediction Center
# Product description and SWPC contact on the Web
# http://www.swpc.noaa.gov/weekly.html
#
# Weekly Highlights and Forecasts
#
Highlights of Solar and Geomagnetic Activity
11 - 17 June 2012

Solar activity was at low to moderate levels. Low levels were
observed on 11 - 12 June due to numerous weak C-class flares from
Regions 1499 (N16, L=184, class/area Cao/060 on 09 June), 1504 (S17,
L=087, class/area Ekc/750 on 16 June), 1506 (N11, L=076, class/area
Hax/100 on 12 June) and 1507 (S26, L=111, class/area Dso/130 on 16
June). Activity increased to moderate levels on 13 and 14 June due
to M-class flaring from Region 1504. At 13/1317 UTC, a long duration
M1/1n was observed with associated Type IV and 10 cm (260 sfu) radio
signatures. On 14 June, another long duration M1/1n was observed at
14/1435 UTC with associated Type IV and 10 cm (1400 sfu) radio
signatures. CME signatures were detected with both of the events.
Solar activity decayed to low levels on 15 - 17 June with numerous
C3 or smaller x-ray events observed from Region 1504.

A greater than 10 MeV proton event at geosynchronous orbit was
observed during the period. The event began at 16/1955 UTC, reached
a maximum of 14 pfu at 16/2020 UTC and ended at 16/2255 UTC. This
weak event was most likely associated with the 14 June M1 x-ray
flare.

The greater than 2 MeV electron flux at geosynchronous orbit was at
high levels on 11 June and moderate levels on 12 - 17 June.

Geomagnetic field activity ranged from quiet to major storm levels.
Quiet to unsettled levels were prevalent from 11 June through late
on 16 June with a brief period of minor storm conditions late on 11
June to early on 12 June due to a sustained period of southward
interplanetary magnetic field (IMF) Bz. At 16/2022 UTC, field
conditions increased to active levels and further increased to minor
to major storm conditions through 17/1500 UTC and decayed to active
levels through the remainder of the period. This increase in
activity was a result of combined effects from the 13 and 14 June
CMEs. On 16 June, three separate sudden impulses were observed at
```

the Boulder magnetometer; 16/0957 UTC (28 nT), 16/2019 UTC (28 nT) and 16/2115 UTC (25 nT). ACE data indicated three shock arrivals at 16/0900 UTC, 16/1931 UTC and 16/2031 UTC. Solar wind speed increased from about 350 km/s to 425 km/s with the first shock, and further increased to around 560 km/s with the second and third shocks. With each successive shock, total IMF field strength reached 10 nT, 17 nT and 34 nT respectively. A magnetopause crossing was also observed by the GOES-15 satellite from around 16/2200 UTC - 16/2300 UTC.

Forecast of Solar and Geomagnetic Activity
18 June - 14 July 2012

Solar activity is expected to be at low to moderate levels through 21 June when Region 1504 will rotate around the west limb. Mostly low levels are expected through 25 June. Low to moderate levels are possible from 26 June - 14 July due to the return of old Regions 1494 (S16, L=198) and 1496 (N17, L=204) on 26 June and the return of old Region 1504 (S17, L=087) on 04 July.

No proton events are expected at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit is expected to be at high levels on 18 - 25 June, normal to moderate levels on 26 June - 03 July and return to high levels on 04 - 14 July.

Geomagnetic field activity is expected to be at unsettled to active levels with isolated minor storm periods on 18 June due to continued effects from the 13 and 14 June CMEs. Quiet to unsettled levels with isolated active periods are possible on 19 - 20 June due to effects from a recurrent coronal hole high speed stream (CH HSS). Mostly quiet conditions are expected from 21 - 26 June. A return to quiet to unsettled levels with isolated active periods are possible on 27 - 30 June with isolated minor storm periods on 01 - 05 July due to a pair of recurrent CH HSS. Mostly quiet conditions are expected on 10 - 14 July.

92. ANS-169 AMSAT News Service Weekly Bulletins

Newsgroup: rec.radio.amateur.space
Date: 2012-06-18 23:11:50 UTC
From: JoAnne Maenpaa <k9jkm@comcast.net>
Message-ID: <002b01cd4da7$c0045900$400d0b00$@net>
Source record: 142
Cross-posted to: rec.radio.amateur.space,rec.radio.info

AMSAT NEWS SERVICE
ANS-169

ANS is a free, weekly, news and information service of AMSAT North America,
The
Radio Amateur Satellite Corporation. ANS reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in
designing, building, launching and communicating through analog and digital
Amateur Radio satellites.

Please send any amateur satellite news or reports to:

ans-editor at amsat.org

In this edition:
* AMSAT 2012 Symposium Weekend Schedule Posted
* Candidates for the AMSAT-NA Board of Directors
* Viet Nam F-1 CubeSat Team Invites You to Send Your Name to Space
* 1st Interplanetary CubeSat Workshop Video and Presentations Available
* Credit Card Sized Raspberry Pi Computer Board Runs Ham Radio Software
* Satellite Shorts From All Over
* ARISS Status - 21 May 2012

SB SAT @ AMSAT $ANS-169.01
ANS-169 AMSAT News Service Weekly Bulletins

AMSAT News Service Bulletin 169.01
From AMSAT HQ SILVER SPRING, MD.
June 17, 2012
To All RADIO AMATEURS
BID: $ANS-169.01

AMSAT 2012 Symposium Weekend Schedule Posted

The 2012 AMSAT Annual Meeting and Space Symposium will be held in Orlando, Florida on the weekend of October 26-28, 2012 at the Holi-day Inn, Orlando Airport Hotel.

The Symposium weekend will feature:

+ Space Symposium with Amateur Satellite Presentations
+ Operating Techniques, News, & Plans from the Amateur Satellite World
+ Board of Directors Meeting open to AMSAT members

+ Meet Board Members and Officers
+ Annual General Membership Meeting
+ Annual Banquet Keynote Speaker and Door Prizes

To help you plan your trip to Orlando the 2012 Symposium Committee
has posted a high-level schedule of the weekend's events.

Preliminary 2012 Symposium Schedule

Thursday 25 October 2012

AMSAT Board of Directors Meeting 8am - 9pm

Friday 26 October 2012

AMSAT Board of Directors Meeting 8am - Noon
Trips to SkyCraft 9am - Noon
AMSAT Symposium 1pm - 5pm

Saturday 27 October 2012

Symposium 8am - 3pm
AMSAT General Meeting 3:30pm
AMSAT Banquet 6:30pm - 10pm

Sunday 28 October 2012

7:30am AMSAT Area Coordinator's Breakfast
Local trip of Interest TBD

Monday 29 October 2012

Special trip to Kennedy Space Center 8am-6pm
Contact Martha if interested

Watch the AMSAT Symposium Web Pages for the latest information:
http://www.amsat.org/amsat-new/symposium/2012/index.php

[ANS thanks the 2012 Symposium Committee for the above information]

Candidates for the AMSAT-NA Board of Directors

There are six candidates running for the AMSAT-NA Board of Directors.
Three
of the candidates are current members of the Board whose term expires
this
year. Ballots will be mailed to the membership by July 15th, and must
be
received at the AMSAT-NA Silver Spring, MD office no later than the
close of
business on September 15th, 2012.

Tom Clark, K3IO *
Steve Coy, K8UD
Mark Hammond, N8MH
Lou McFadin, W5DID *
Gould Smith, WA4SXM *
Patrick E. Stoddard, WD9EWK

* Incumbent

[ANS thanks Alan, WA4SCA, for the above information]

Viet Nam F-1 CubeSat Team Invites You to Send Your Name to Space

The latest news from the F-1 CubeSat Team, posted on their website blog (http://fspace.edu.vn/) and on the AMSAT-UK web with additional photos (http://www.uk.amsat.org/8215) reports that the satellite's flight safety review is complete and the FSpace team together with their partner NanoRacks LLC has satisfied the technical requirements and standards set by the launch vehicle provider.

F-1 CubeSat is ready for its scheduled launch in July 21, 2012 from Japan. If everything goes according to plan, the F-1 CubeSat will be delivered to Japan by the end of June. Then along with four other CubeSats (RAIKO, WE-WISH, FITSAT-1 and TechEdSat) F-1 will be loaded onboard HTV-3 "Kounotori" transfer vehicle for integration with the JAXA HII-B launch vehicle.

These CubeSats will remain aboard the ISS until September, 2012 when Japanese astronaut and radio amateur Akihiko Hoshide KE5DNI should deploy it into space from the ISS using the Kibo robot arm.

F-1 carries two Yaesu VX-3R transceivers using 145.980 and 437.485 MHz.

The FSpace team are offering the public a chance to send their name/ callsign and a message into space onboard the F-1 CubeSat. You will also be presented with a certificate!
See this link: http://fspace.edu.vn/?page_id1

[ANS thanks the FSpace Team and AMSAT-UK for the above information]

1st Interplanetary CubeSat Workshop Video and Presentations Available

Video and presentations from the 1st Interplanetary CubeSat Workshop, held in and around MIT and Boston on May 29-30 are available for down-loading. See: http://icubesat.wordpress.com/program/ Copies and videos of all the presentations, posters and ancillary sessions can be found by clicking on their titles.

Please note that this conference was an open conference and did not wish to discuss information restricted by ITAR. U.S. citizens and permanent residents were responsible for ensuring that technical data

presented was not restricted by ITAR and that ITAR controlled information was not discussed with non-U.S. citizens.

[ANS thanks the iCubeSat Workshop for the above information]

Credit Card Sized Raspberry Pi Computer Board Runs Ham Radio Software

AMSAT-UK and AMSAT-NA member Dave Johnson, G4DPZ, has been using the Raspberry Pi to run amateur radio satellite software.

The £22 ($35) Model B Raspberry Pi is a credit-card sized ARM-based computer board that plugs into a TV and a keyboard. Based around the 700 MHz ARM11 processor the board has 256 MB SDRAM, two USB ports, Ethernet with composite and HDMI video outputs. Low-level peripherals are GPIO pins, SPI, I²C, I²S and UART.

It was developed in Cambridgeshire by a UK registered charity, the Raspberry Pi Foundation, which exists to promote the study of computer science and related topics, especially at school level, and to put the fun back into learning computing.

Dave's Raspberry Pi runs Debian Squeeze with Xwindows and is accessed using VNC over his shack network.

The first amateur radio application he got running was the GPredict satellite tracking software, thanks go to Alex Csete OZ9AEC for making such a portable implementation. Dave found the sofware and updates of the Keplerian Two Line Elements from the Internet worked perfectly.

More information about the Raspberry Pi can be found at:
http://www.raspberrypi.org/

GPredict free real-time satellite tracking and orbit prediction software can be found at: http://gpredict.oz9aec.net/

See also AMSAT-UK (http://www.uk.amsat.org/8019) for photos and additional information about the Raspberry Pi.

[ANS thanks AMSAT-UK for the above information]

Satellite Shorts From All Over

+ The 13 Colonies Special Event operation needs a satellite operator from the state of Massachusetts. If you can help please contact the coordinator Dave Webb, KB1PVH [kb1pvh at gmail.com]

+ Nick Pugh, K5QXJ posted a video recorded during an AubieSat-1 pass after its recent on-orbit reconfiguration. See:
http://www.youtube.com/watch?v=M1z7C6I-0

+ Plan Ahead! To celebrate Venezuelan Navy Day, members of the Grupo
DX Caracas will be active as YW5B from La Blanquilla Island between
July 11-16. Activity will be on 160-2 meters using CW, SSB, Satel-
lites,
FM and the Digital modes. (Ohio/Penn DX Bulletin No. 1065)

+ The next Hudson Valley Satcom net date is Thursday June 21, 8PM EDT
(UTC-4 UTC) on the 146.97 MHz MBARC Repeater (PL 100). The echolink
connection has been experiencing problems so you are invited to send
and e-mail to N2OXV at arrl.net to make sure that the N2EYH-L
EchoLink
node is available if you plan to join via this route. (Stu, WA2BSS)

+ A video of the AMSAT-UK FunCube Dongle receiving the HORYU-2 Satel-
lite is posted at: http://www.uk.amsat.org/?p=16. You will also
find links describing the satellite and a link to software for
telemetry decoding.

+ VE7BQH has just updated his 2m and 6m antenna comparison tables
and provided additional information on each antenna. The changes
are explained by him along with links to both text and spreadsheet
versions of the tables: http://www.bigskyspaces.com/w7gj/6mTable.htm

[ANS thanks everyone for the above information]

ARISS Status - 11 June 2012

Amateur Radio on the International Space Station (ARISS) Status Report
June 11, 2012

1. Japanese Contact Successful

On Wednesday, June 6, students attending Kawatinagano Higashi Junior
High School in Kawatinagano, Osaka, Japan took part in an Amateur
Radio on the International Space Station (ARISS) contact with Andr
Kuipers, PI9ISS on ISS. At the beginning of the contact the school
was experiencing a power blackout, but recovered in time so that
all children were able to ask their questions. The event supplement-
ed lessons about space and the ISS.

2. Astronaut Training Status

Astronaut Jeannette Epps took and passed her amateur radio license
exam last week and was given the callsign KF5QNU. She is not assign-
ed to any future ISS expedition crews at this time.

[ANS thanks Carol, KB3LKI, for the above information]

/EX

In addition to regular membership, AMSAT offers membership in the
President's Club. Members of the President's Club, as sustaining
donors to AMSAT Project Funds, will be eligible to receive addi-

tional benefits. Application forms are available from the AMSAT Office.

Primary and secondary school students are eligible for membership at one-half the standard yearly rate. Post-secondary school students enrolled in at least half time status shall be eligible for the student rate for a maximum of 6 post-secondary years in this status. Contact Martha at the AMSAT Office for additional student membership information.

73,
This week's ANS Editor,
Lee McLamb, KU4OS

93. thanks to storm

Newsgroup: rec.radio.amateur.space
Date: 2012-06-22 07:18:20 UTC
From: peter <peterswanson44@yahoo.com>
Message-ID: <2859028@news.colorado.edu>
Source record: 143

Dear all,

it might be necessary to develop the recovery of the weather in an efficient
way after analyzing the storm;
Subsequently, it should be necessary to determine the flow control of the weather in a
smart way before evaluating the storm as well as the concept of the weather
monitoring;
To move forward, you should understand what follows:
Encana has maintained that water in the
area is naturally poor and that its operations did not cause the problems &#65533;
fracking had also occurred before the company purchased the gas field.
Moreover, the energy industry has steadfastly pointed out that there has
never been any conclusive link between fracking and water contamination.
In
the meantime, the state has offered to provide cisterns for local residents,
using $750,000 allocated by the Wyoming Legislature this year. Under the
plan, people here would still have to pay a fee to have their water hauled
from the nearby community of Pavillion, at a cost that could run more than
$150 per month.
Mr. Hock said it should have come as no surprise that the
E.P.A.&#65533;s two monitoring wells showed high levels of methane and benzene
because they were drilled deep into a natural gas field.
Encana has
maintained that water in the area is naturally poor and that its operations
did not cause the problems &#65533; fracking had also occurred before the company
purchased the gas field. Moreover, the energy industry has steadfastly
pointed out that there has never been any conclusive link between fracking
and water contamination.
For the last few years, a small group of farmers
and landowners scattered across this rural Wyoming basin have complained that
their water wells have been contaminated with chemicals from a controversial
drilling technique known as hydraulic fracturing, or fracking.
After an
outcry from Wyoming&#65533;s governor, Matt Mead, and the energy industry that the
federal report was premature and inconclusive, more testing was conducted by
the United States Geological Survey and is being processed. The E.P.A. is
also in the midst of collecting additional water samples for study.
Mr.
Fenton said he thought he had dodged a bullet until about three years ago,
when his tap water began occasionally fizzing and smelling like petroleum.
And even though Encana is giving him drinking water, Mr. Fenton said he and
his family still bathe in dirty water.

After discussing about the storm , this site seems appropriate:
http://www.youtube.com/watch%3Fv%3D0CkEObS0J4g
http://www.youtube.com/watch%3Fv%3D0CkEObS0J4g
http://www.youtube.com/watch%3Fv%3DDcsA1nOaNQQ
http://www.youtube.com/watch%3Fv%3DDcsA1nOaNQQ
http://www.youtube.com/watch%3Fv%3DKCF49AQbgcI
http://www.youtube.com/watch%3Fv%3DKCF49AQbgcI
http://beffrey2.yuku.com/forums/71/General-Weather-Discussion%3Fpage%3D2
http://beffrey2.yuku.com/forums/71/General-Weather-Discussion%3Fpage%3D3
http://tehescmarts.edu.glogster.com/why-the-weather/
http://www.americantowns.com/tx/whitney/videos

Best regards

94. ANS-176 AMSAT News Service Weekly Bulletins

Newsgroup: rec.radio.amateur.space
Date: 2012-06-24 13:06:15 UTC
From: JoAnne Maenpaa <k9jkm@comcast.net>
Message-ID: <001501cd520a$1eeab020$5cc01060$@net>
Source record: 144
Cross-posted to: rec.radio.amateur.space,rec.radio.info

AMSAT NEWS SERVICE
ANS-176

ANS is a free, weekly, news and information service of AMSAT North America,
The
Radio Amateur Satellite Corporation. ANS reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in
designing, building, launching and communicating through analog and digital
Amateur Radio satellites.

Please send any amateur satellite news or reports to:

ans-editor@amsat.org

In this edition:
* Reminder to Submit Your AMSAT Field Day Satellite Summary Sheet
* Video Posted From ARISS Contact with 8N3KN in Japan
* Celebrating 10th Anniversary of OSCAR 7's Return To Life
* AO-7 DX Opportunities
* ARISS Contact Planned as NASA Hosts Future Female Explorers
* Winner of HORYU-2 Receiving Competition
* ARISS Status - 21 May 2012

SB SAT @ AMSAT $ANS-176.01
ANS-176 AMSAT News Service Weekly Bulletins

AMSAT News Service Bulletin 176.01
From AMSAT HQ SILVER SPRING, MD.
June 24, 2012
To All RADIO AMATEURS
BID: $ANS-176.01

Reminder to Submit Your AMSAT Field Day Satellite Summary Sheet

By the time you are reading this bulletin the 2012 Field Day may be already complete for you. The AMSAT Field Day Rules document (available in PDF and MS-Word format) are linked on the front page of the home page at http://www.amsat.org.

The Field Day Rules document contains the Satellite Summary Sheet for submitting your entry. This sheet should be used for submission of the AMSAT Field Day competition and be received by AMSAT Director of Awards, Bruce Paige, KK5DO (email or postal mail) by 11:59 P.M.

CDT, Monday, July 09, 2012. The preferred method for submitting your log is via e-mail to kk5do@amsat.org or kk5do@arrl.net.

You may also use the postal service but give plenty of time for your results to arrive by the submission date. Add photographs or other interesting information that can be used in an article for the Journal.

You will receive an email back (within one or two days) from Bruce when he receives your email submission. If you do not receive a confirmation message, then he has not received your submission. Try sending it again or send it to the other email address.

If mailing your submission, the address is:

Bruce Paige, KK5DO
Director of Awards and Contests
PO Box 310
Alief, TX 77411-0310.

Certificates will be awarded to the first-place emergency power/portable station at the AMSAT General Meeting and Space Symposium in the fall of 2012. Certificates will also be awarded to the second and third place portable/emergency operation in addition to the first-place home station running on emergency power. A station submitting high, award-winning scores will be requested to send in dupe sheets for analog contacts and message listings for digital downloads.

[ANS thanks Bruce Paige, KK5DO for the above information]

Video Posted From ARISS Contact with 8N3KN in Japan

On Wednesday, June 6, students attending Kawachinagano Eastside Junior High school, Osaka prefecture, Japantook part in an Amateur Radio on the International Space Station (ARISS) contact with Andr&#65533; Kuipers, PI9ISS on ISS.

At the beginning of the contact the school was experiencing a power blackout, but recovered in time so that all children were able to ask their questions. The event supplemented lessons about space and the ISS.

Video of this contact is now available on YouTube:
http://www.youtube.com/watch?v&#65533;rEDpqcct4&feature&#65533;ayer_embedded

[ANS thanks ARISS for the above information]

Celebrating 10th Anniversary of OSCAR 7's Return To Life

An article posted on the AMSAT-UK web this week reminds us of the 10th anniversary of the auspicious discovery by Pat Gowen, G3IOR

on June 21, 2002 when he first noticed a beacon sending slow 8-10 wpm CW on 145.973.8 MHz. It sounded like old OSCAR satellite telemetry, it had the familiar HI HI followed by a string of numbers in groups of three. After monitoring by many radio amateurs it turned out to be OSCAR-7, and it seemed to have come back from the dead.

Pat posted a message on the amsat-bb bulletin board, "I have just come across something most remarkable this Friday 21st June evening ... It sounded VERY familiar ... Could any veteran keen observers (who might look for it) ..." Pat's original message announcing his discovery can still be read in the amsat-bb archives, see: http://www.amsat.org/amsat/archive/amsat-bb/200206/msg00525.html

It is believed that in 1981 the batteries failed short-circuit, however, in 2002 they became open-circuit enabling the satellite to run again from the solar panels. Since that day OSCAR 7 has been operational when in sunlight and provided radio amateurs with many long distance (DX) SSB/CW contacts.

Remember when working OSCAR 7 use the least uplink power possible to minimize your downlink power usage, and maximize the number of simultaneous contacts supported in the passband.

A BBC News report Radio ham finds lost satellite about the reception of OSCAR 7 by Dave Rowan G4CUO can be seen at: http://news.bbc.co.uk/1/hi/england/2149381.stm

A collection of photos by Dick Daniels W4PUJ taken during the construction, test and launch of the AMSAT-OSCAR 7 spacecraft in 1973 and 1974 can be viewed at: http://n4hy.smugmug.com/AMSAT/AMSAT-Oscar-7

Be sure to view the full AMSAT-UK article containing photos and additional links on-line at: http://www.uk.amsat.org/8524

The satellite alternates between Mode A and B with random changes between modes when AO-7 powers up re-entering the sunlit portion of its orbit. Monitor the Live OSCAR Satellite Status Page on-line at http://oscar.dcarr.org/ for postings of latest operating mode.

Uplink: 145.850 to 145.950 MHz CW/USB Mode A
432.125 to 432.175 MHz CW/LSB Mode B

Downlink: 29.400 to 29.500 MHz CW/USB Mode A (1W PEP)
145.975 to 145.925 MHz CW/USB Mode B (8W PEP)
145.975 to 145.925 MHz CW/USB Mode C (2W PEP)
Beacons: 29.502 MHz CW
145.972 MHz CW
435.100 MHz CW
2304.100 MHz CW

Official Webpage:
http://www.amsat.org/amsat-new/satellites/sat_summary/ao7.php

[ANS thanks AMSAT-UK and AMSAT-NA for the above information]

AO-7 DX Opportunities

Paul Robinson, 2E1EUB will be operating mobile 2M1EUB as he tours around Scotland between June 26 through approximately July 9. He plans operations from grid squares IO77, IO87, and IO86 with additional coverage if time permits. He will be active from any spots along the road that he can access the satellites. Activity will be on 160 and 80 meters, 2 meters SSB and on satellites including AO-7. Satellite AO-7. Check out QRZ.com under 2M1EUB for more info.

Bill Dzurilla, NZ5N is now active as OM3BD from Slovakia, grid locator JN88mf this summer and is active on AO-7. Any North American stations in range are invited to email Bill for skeds: billdz.geo@yahoo.com

Bill wrote, "It seems that the orbits have somehow shifted and my windows to North America are a bit longer this year, and from my hill I can hear the bird to -2 degrees."

[ANS thanks Paul Robinson 2E1EUB/2M1EUB and Bill Dzurilla, NZ5N/OM3BD for the above information]

ARISS Contact Planned as NASA Hosts Future Female Explorers

A press release from NASA Headquarters, Washington, DC notes that this week eighty-four female high school students from 29 states will plan a simulated mission to Mars and experience life as an engineer or scientist when NASA's Johnson Space Center in Houston hosts two events focused on science, technology, engineering and mathematics (STEM) in June and July.

The Women in STEM High School Aerospace Scholars project, or WISH, is sponsoring two six-day summer camps for rising high school seniors. The young women will work in teams with female NASA mentors to develop mission plans for launching to Mars, living and working there, and integrating the many components necessary for a successful planetary mission. They will work within the confines of a fictitious budget and build several small mockups of vehicles to demonstrate a successful launch and landing of the Mars spacecraft.

"WISH gives some of our brightest future innovators a chance to experience some of the exciting challenges that NASA engineers and scientists face on a daily basis," said Johnson Deputy Director and four-time space shuttle astronaut Ellen Ochoa. "It shows the young women that there are a variety of opportunities for them in technical fields."

Young women participating June 24-29 will hear a first-hand account of life in space from NASA astronaut Shannon Walker. Participants

July 8-13 will have a chance to speak with a current space station astronaut via ham radio as part of the Amateur Radio on the International Space Station program, a NASA educational initiative that facilitates direct links between students and astronauts.

The young women were selected based on completion of interactive, online lessons focused on space exploration and mapped to national education standards, academic merits and geographic diversity. The WISH program encourages young women to pursue science, technology, engineering and mathematics degrees and exposes them to the real-world applications of STEM careers at NASA. This program is in its second year. It began as a NASA accompaniment to the White House Council on Women and Girls.

The NASA Press release can be viewed on-line at:
http://www.nasa.gov/home/hqnews/2012/jun/HQ_12-209_WISH.html

[ANS thanks NASA for the above information]

Winner of HORYU-2 Receiving Competition

Built by students at the Kyushu Institute of Technology (KIT) the amateur radio satellite HORYU-2 was launched on May 17 at 1639 UT.

Radio amateurs from around the world sent in telemetry and the winner with the most points has been announced as Yoshitomo Iji JA6PL.

The top three places were:

1st place: JA6PL (91 points)
2nd place: ZL2BX (36 points)
3rd place: JF1EUY (35 points)

The satellite's callsign is JG6YBW and the CW telemetry beacon frequency is 437.375 MHz (+/- Doppler shift).

The free KIT HORYU-2 telemetry software can be downloaded from
http://kitsat.ele.kyutech.ac.jp/Documents/information_launch_english.html

KIT HORYU Blog in Google English http://tinyurl.com/HORYU-Blog
Japanese HORYU website in Google English:
http://tinyurl.com/HoryuSatellite
English language version of HORYU website:
http://kitsat.ele.kyutech.ac.jp/index_e_new.html
Further information on HORYU-2 is at:
http://www.uk.amsat.org/7404
HORYU-2 online WebSDR receiver http://sdr.opt.ro:8901/
KIT HORYU-2 Facebook Group
https://www.facebook.com/groups/277436165678985/
HORYU-2 CW Telemetry Decoder by DK3WN
http://tinyurl.com/SatSoftwareDK3WN/

[ANS thanks the HORYU-2 Team and AMSAT-UK for the above information]

ARISS Status - 18 June 2012

1. Successful ARISS Contacts Held

ESA-ESTEC arranged for an ARISS contact that was held on Tuesday,
June 12 at the Ruimtevaart Museum in Lelystad, the Netherlands with
students that had taken part in Andr&#65533; Kuipers' Mission: Spaceship
Earth competition. Through this program, Kuipers gave assignments
to Dutch school children and the winners of the competition were
invited to the event. Kuipers chatted with students and answered
their questions about space. ARISS delegate Bertus H&#65533;sken, PE1KEH
attended the event and presented ARISS activities to the audience.
Telebridge station W6SRJ in California handled the radio connection.
To view video of the event, see:
http://www.ruimteschipaarde.nl/ruimtelog/Winnaars-Missie-2-leggen-radioco
nta
ct-met-Andr-Kuipers/186

Students from St. Anne's Primary School in Strathfield South, NSW,
Australia spoke with Joe Acaba, KE5DAR on the ISS through an Amateur
Radio on the International Space Station (ARISS) contact on Wednesday,
June 13 via telebridge station LU8YY in Argentina. Approximately 150
people attended the event. The contact was integrated into the space
curriculum across all grades and was held along with the school's
science fair.

2. Astronaut Training Status

Barry Wilmore took part in an ARISS introductory class on Monday,
June 11.Wilmore is slated to fly with Expedition 41 in September 2014.

[ANS thanks Carol, KB3LKI, for the above information]

/EX

In addition to regular membership, AMSAT offers membership in the
President's Club. Members of the President's Club, as sustaining
donors to AMSAT Project Funds, will be eligible to receive addi-
tional benefits. Application forms are available from the AMSAT
Office.

Primary and secondary school students are eligible for membership
at one-half the standard yearly rate. Post-secondary school students
enrolled in at least half time status shall be eligible for the stu-
dent rate for a maximum of 6 post-secondary years in this status.
Contact Martha at the AMSAT Office for additional student membership
information.

73,
This week's ANS Editor,
Lee McLamb, KU4OS

ku4os at amsat dot org

95. Weekly Highlights of Solar and Geomagnetic Activity, 18 - 24 June 2012

Newsgroup: rec.radio.amateur.space
Date: 2012-06-25 15:30:06 UTC
From: SWPC.Webmaster@noaa.gov
Message-ID: <20120625153001.F139233C91@panix2.panix.com>
Source record: 145
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.dx,rec.radio.amateur.space,rec.radio.shortwave,rec.radio.info

```
:Product: Weekly Highlights and Forecasts
:Issued: 2012 Jun 25 1246 UTC
# Prepared by the US Dept. of Commerce, NOAA, Space Weather Prediction Center
# Product description and SWPC contact on the Web
# http://www.swpc.noaa.gov/weekly.html
#
# Weekly Highlights and Forecasts
#
Highlights of Solar and Geomagnetic Activity
18 - 24 June 2012

Solar activity ranged from very low to low during the period. The
largest x-ray event was a C3 flare, produced by Region 1504 (S17,
L=087, class/area Ekc/750 on 16 June) at 20/1628 UTC. Two new active
regions were numbered during the period, Region 1510 (S16, L=019,
class/area Cro/10 on 19 June) and Region 1511 (N15, L=357,
class/area Cro/30 on 23 June). Neither of these new regions produced
a flare event. No Earth directed CMEs were observed during the
period.

No proton events were observed at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit was at
high levels throughout the period.

Geomagnetic field activity ranged from quiet to minor storm levels
during the period. Early on 18 June, minor storm levels were
observed as the result of residual effects from the 13 and 14 June
CMEs. Conditions recovered to quiet levels later on the 18th and
remained so for the rest of the period.

Forecast of Solar and Geomagnetic Activity
25 June - 21 July 2012

Solar activity is expected to begin the period at very low to low
levels and remain so until around 03 July. Beginning on 04 July, a
chance for M-class flares will exist when old Region 1504 (S17,
L=087) is expected to return.

No proton events are expected at geosynchronous orbit, though a
slight chance may exist when Region 1504 returns.

The greater than 2 MeV electron flux at geosynchronous orbit is
expected to begin the period at normal to moderate levels, and
remain so through 02 July. Flux values are expected to increase to
high levels on 3-8 July due to recurrent coronal hole high speed
```

stream effects. Normal to moderate levels are expected to return from 9 July through the remainder of the period.

Geomagnetic field activity is expected to begin the period at mostly quiet levels and remain so through 28 June. On 29 June, a possible Co-rotating Interaction Region is forecast to produce mostly unsettled levels with a chance for active conditions prior to the onset of a coronal hole (CH) high speed stream. CH effects are expected to produce unsettled to active levels with a chance for minor storm periods on 30 June through 03 July. On 04-05 July, quiet to unsettled levels are expected as the CH effects wane. Mostly quiet conditions with isolated unsettled periods are forecast from 06 July through the end of the period.

96. ANS-183 AMSAT News Service Weekly Bulletins

Newsgroup: rec.radio.amateur.space
Date: 2012-07-01 01:48:06 UTC
From: JoAnne Maenpaa <k9jkm@comcast.net>
Message-ID: <001701cd572a$d9cfa740$8d6ef5c0$@net>
Source record: 146
Cross-posted to: rec.radio.amateur.space,rec.radio.info

AMSAT NEWS SERVICE
ANS-183

ANS is a free, weekly, news and information service of AMSAT North America, The Radio Amateur Satellite Corporation. ANS reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in designing, building, launching and communicating through analog and digital Amateur Radio satellites.

Please send any amateur satellite news or reports to:
ans-editor at amsat.org

****
* Remember to send in your 2012 AMSAT Field Day Satellite Summary *
* Sheet to kk5do@amsat.org or kk5do@arrl.net by July 9, 2012 *
* Field Day Rules and Sheets are linked at http://www.amsat.org. *
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In this edition:

* AMSAT Journal In the Mail
* Call For Articles - Author's Guide to the AMSAT Journal
* 13 Original Colonies Special Event Includes Satellite Operations
* Canada Scouts ARISS Contact Successful
* CQ Magazine Worked All Zones - Satellite Award
* Chinese Amateur Satellite Group Shows CAS-2 Satellite Model
* Soyuz to Fly 3 Hams Up, 3 Hams Staying, 3 Hams Coming Home
* KiwiSAT Hoping for Launch mid-2013
* Five CubeSats Ready for July 21 JAXA HTV-3 Launch
* AMSAT News Podcasts Available to Download and Listen
* Satellite Shorts From All Over

SB SAT @ AMSAT $ANS-183.01
ANS-183 AMSAT News Service Weekly Bulletins

AMSAT News Service Bulletin 183.01
>From AMSAT HQ SILVER SPRING, MD.
July 1, 2012
To All RADIO AMATEURS
BID: $ANS-183.01

AMSAT Journal In the Mail

AMSAT Journal Editor Ed Long, WA4SWJ said this week the next issue of the Journal is at the print shop and will be in the mail soon.

With this issue we note that Ed is retiring as the Journal editor. Doug Loughmiller, W5BL will take over the reins of the Journal. Ed, thank-you for your years of hard work on the Journal! Doug, we look forward to working with you!

There has been a delay in publishing the Journal. AMSAT President Barry Baines, WD4ASW noted, "The reasons for not getting the Journal published on time is not due to the transition of editors, but due to lack of materials for publication. Please read the associated call for articles news item in this ANS ... and send Doug your materials!"

Here are some of the features of the upcoming Journal:

+ Satellite Export Controls - Progress Report

+ FUNcube Project Update

+ Spotlight on VUSAT OSCAR 52 (VO-52)

+ 2011 AMSAT BoD Meeting, Symposium & General Meeting
AMSAT Board of Directors Meeting Minutes, San Jose, CA

+ AMSAT Activities at the 2012 Greater Houston Hamfest

+ Museum Ships Weekend 2012 - A Record Breaking Year

+ Updates of AMSAT's on-going development of launch opportunities including Fox-1 aiming for early 2013.

o AMSAT co-development and acceptance into three satellite programs in the NASA Edison small satellite flight demonstration mission.

o AMSAT partnership with Auburn University and The University of Alabama on a National Science Foundation (NSF) grant application.

Keep an eye on your mailbox for your next issue of the AMSAT Journal!

[ANS thanks Ed Long, WA4SWJ; and Barry Baines, WD4ASW for the above information]

Call For Articles - Author's Guide to the AMSAT Journal

You are invited to share your amateur radio in space ideas and experiences with fellow satellite operators.

The AMSAT Journal, a bi-monthly publication of AMSAT-North America, brings you the latest information in satellite mission planning, satellite-related hardware design and construction, satellite-related software design and implementation, and amateur radio earth station construction.

AMSAT Journal Editor Doug Loughmiller, W5BL noted, "Publishing a quality publication is hard work, much like building a satellite itself, it requires a team working together to insure that the publication reaches the membership in a timely manner which contains informative and useful content. In my view the Journal should address a number of topics on a regular basis. I would like to enlist the services of individuals who would be willing to serve as a column coordinators for each of the topics", including:

+ Organizational news
+ Spacecraft Engineering Topics
+ Spacecraft Operational Topics (Command and Control, mission analysis etc.)
+ Spacecraft Utilization (What's on the birds, what are we learning?)
+ Hands-On Projects for ground station applications
+ Educational News
+ Amateur Radio Astronomy
+ EME
+ High Altitude Balloon Flights
+ General Space Science Topics.

Your articles are especially welcome. Simply type out your ideas on your computer and send them in. Your article will be "cleaned up" and formatted for you during the editorial processing of the AMSAT Journal. Send your article to the AMSAT Journal e-mail box via: journal@amsat.org.

There is no need to do any special formatting on your submission because the final layout format is driven by the magazine's type setting software. All you need to include is:

+ Your text in MS-Word or plain text format

+ Graphics in as high pixel resolution possible saved in separate files (jpg, gif, tiff).

An MS-Word file with embedded graphics is the most difficult format to typeset. Separate text and graphics files work the best.

If you have any questions, or need some help feel free to contact the editor at the AMSAT Journal at journal@amsat.org.

The AMSAT Journal is looking forward to hearing from you soon!

[ANS thanks Ed Long, WA4SWJ; Doug Loughmiller, W5BL; and Barry Baines, WD4ASW for the above information]

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13 Original Colonies Special Event Includes Satellite Operations

The 2012 13 Colonies Special Event has been operating since July 1 but there is still time to work them since they plan to be on the air through July 5. Operators will be on the satellites again this year for the special event.

Recognizing that the 4th comes in the middle of the week (Wednesday)
please keep in mind that there may be fewer operators available on
the work days so, PLEASE BE PATIENT!

Please send your QSL requests directly to each operator.

STATE SE CALL STATION & OPERATOR
------ -------- -------------------
NY K2A WB2OQQ Pete
VA K2B NL7VX Steve
RI K2C N1MIW Larry
CT K2D WA8SME Mark
DE K2E KB2M Jeff (SSB Birds)
DE K2E W3FIS Paul (FM Birds)
MD K2F WA3SWJ Bruce
GA K2G N3TL Tim
MA K2H KB1PVH Dave
NJ K2I KB2M Jeff (Here when not in DE)
NC K2J W4MPS Marc
NH K2K NE1H Bob
SC K2L K4YYL Art
PA K2M KB3WSW Elizabeth

Link to the satellite page with the list of operators and additional
information: http://www.13colonies.info/Satellites.htm

The main page with all the time and date information is:
http://www.13colonies.info/

[ANS thanks Dave, KB1PVH for the above information]

Canada Scouts ARISS Contact Successful

On Saturday, June 23, Scouts Canada, Nova Scotia Council in Dart-
mouth, Canada called on-orbit astronaut Andr&#xfffd; Kuipers, PI9ISS during
an Amateur Radio on the International Space Station (ARISS) contact
via telebridge station VK5ZAI in Australia.

The contact was held as part of a space event with Scouts of various
ages in conjunction with groups earning their Science Badge awards.
Over 150 were in attendance. The contact was Webcast and the present-
ation was captured for retransmission by Aliant IPTV Atlantic during
July/August and for development of an edited CD for distribution to
interested parties.

There was excellent media coverage including 3 television stations
and two newspapers. A 20 minute radio interview was held with "The
Rick Howe Show" on Friday, June 22 on Amateur Radio - ARISS and Field
Day Operations. In addition, an article is being prepared for period-
icals: Royal Astronomical Society, Halifax Public Libraries, Radio
Amateurs of Canada.

[ANS thanks the ARISS Status Report for June 25, 2012 for the above information]

CQ Magazine Worked All Zones - Satellite Award

Sponsored by CQ Magazine, the Worked All Zones award program is one of the longest running in Ham Radio, having its start prior to WWII.

CQ Magazine explains the details of this award on their website:

The WAZ program, while it involves the use of "DX Entities", does not rely on any particular "Entity's" status as a country. The WAZ award is geographically focused, which is where it's challenge lies. The CQ Worked All Zones (WAZ) Award and its variations are issued to any licensed amateur station presenting proof of contact with the appropriate number of CQ zones of the world. (The CQ Zones map and additional zone information is posted on the CQ web site.)

The Worked All Zones - Satellite award has been available for contacts made since January 1, 1989. While opportunities to contact many of the DX zones were more numerous when HEO satellites were active, your confirmed contacts back to 1989 would qualify you to apply for this award now.

The Satellite WAZ Award requires that the applicant submit QSL cards from at least 25 zones. The Satellite Award requires that the applicant submit QSL cards from at least 25 zones. Endorsement stickers are issued at the 30, 35, 36, 37, 38, 39 and 40 zone levels. The Satellite Award is not band specific, you may apply QSO's from multiple bands. The Satellite WAZ certificate will indicate the number of zones that are confirmed when the applicant first applies for the award.

Applications and Cards for this award must be submitted to the WAZ Award Manager, Floyd Gerald, N5FG (n5fg@cq-amateur-radio.com)

You can find all of the details of the CQ Magazine Worked All Zone Award on-line at: http://tinyurl.com/CQ-WAZ-Award (CQ Web Site).

[ANS thanks CQ Magazine WAZ Award Manager Floyd Gerald, N5FG for the above information]

Chinese Amateur Satellite Group Shows CAS-2 Satellite Model

This year the Chinese Amateur Satellite Group (CAMSAT) was a special guest in the AMSAT-DL booth at the HamRadio Fair in Friedrichshafen – HamRadio 2012.

CAMSAT had a model of their next amateur radio satellite, CAS-2 which is planned as the next generation after their first CAS-1 (aka XW-1, HO-68) satellite. HO-68 carried a linear transponder and proved very popular with radio amateurs world-wide.

The May 20 announcement came to light that CAMSAT and students at the Qian Youth Aerospace Academy are now working on the next satellite CAS-2. The announcement indicates that two separate CAS-2 satellite structures are being built – A1 and A2.

The launch of CAS-2 is planned for 2014 into a 1000 km orbit with an inclination of 12 degrees. This orbit means it may not be receivable in those countries at high latitudes.

It is understood that most of the room in CAS-2 will be taken up by the primary (non-amateur) payload and it has only been possible to fit a single channel FM amateur transponder in the satellite.

Further information in Google English can be seen at:
http://tinyurl.com/CAMSAT-CAS-2-Satellite

A photo on the AMSAT-UK web (http://www.uk.amsat.org/8665) shows Fan Shaomin, BA1EO with the CAS-2 model.

A group picture taken at Ham Radio 2012 in Friedrichshafen and a picture of the engraved glass plaque that CAMSAT presented to AMSAT-DL can be seen on the AMSAT Deutschland Facebook page.

[ANS thanks CAMSAT, AMSAT-DL, and AMSAT-UK for the above information]

Soyuz to Fly 3 Hams Up, 3 Hams Staying, 3 Hams Coming Home

Three Expedition 32 crew members to the International Space Station are scheduled to launch aboard the Soyuz TMA-05M from the Baikonur Space Center in Kazakhstan on July 15.

The Expedition 32 crew members are NASA astronaut Suni Williams KD5PLB, cosmonaut Yury Malenchenko RK3DUP and Japanese astronaut Aki Hoshide KE5DNI. The trio has been passing tests at the Gagarin Cosmonaut Training Center in Star City, outside of Moscow.

They will join Expedition 31's NASA astronaut Joe Acaba KE5DAR and cosmonauts Gennady Padalka RN3DT and Sergei Revin RN3BS on board the orbiting outpost.

Meanwhile, fellow Expedition 31 members cosmonaut Oleg Kononenko RN3DX and NASA's Don Pettit KD5MDT and Andre Kuipers PI9ISS returned to Earth on July 1.

A back-up ISS crew was also confirmed on Friday. It includes Canadian astronaut Chris Hadfield KC5RNJ/VA3OOG, NASA astronaut Tom Marshburn KE5HOC and cosmonaut Roman Romanenko (no call at this time).

[ANS thanks SpaceDaily.com for the above information]

KiwiSAT Hoping for Launch mid-2013

News from New Zealand, received via AMSAT-UK reports the development of the amateur radio satellite KiwiSAT is completed and it is now ready for a LEO launch. See: http://www.uk.amsat.org/8686.

KiwiSat carries a 435 or 1268 MHz to 145 MHz linear transponder for SSB/CW operation:

+ Transmit Power: 2 Watts PEP.
+ Beacon frequency: 145.885 MHz
+ Uplink: (U-Band) 435.265 to 435.235 MHZ LSB or
+ Uplink: (L-Band) 1268.880 to 1268.850 MHz LSB
+ Down link: 145.850 to 145.880 MHz USB

The KiwiSAT website says the team have been in discussion with ISC Kosmatras for a DNEPR launch. They hope the satellite will be launched mid-2013. On June 18, 2012, the KiwiSAT team released a status update which can be read at http://www.kiwisat.org/status.html

In addition to the transponder KiwiSAT also carries an Attitude Determination And Control (ADAC) experiment developed by students at Massey University.

See also:
KiwiSAT http://www.kiwisat.org/
AMSAT-ZL http://www.amsat-zl.org.nz/

[ANS thanks the KiwiSat Team, AMSAT-ZL, and AMSAT-UK for the above information]

Five CubeSats Ready for July 21 JAXA HTV-3 Launch

Viet Nam's F-1 CubeSat team announced on June 23 they have passed flight safety review and are cleared to be included in JAXA HTV-3 mission to the ISS. F-1 arrived at Japan's Tsukuba Space Center where it and four companion CubeSats (RAIKO, WE WISH, FITSAT-1 and TechEdSat) will be integrated with the J-SSOD small satellite deployer before leaving for the Tanegashima launch pad.

After arriving at the ISS aboard the JAXA HTV-3 ISS resupply mission, the J-SSOD deployer will be integrated to the Japanese Experiment Module, also known as Kibo. They will be deployed with the Kibo robotic arm planned for the September, 2012 timeframe.

The five CubeSats on this mission include:
+ Raiko
+ We Wish
+ FITSat 1
+ F-1 Vietnam Student CubeSat
+ TechEdSat

RAIKO - Wakayama University, Japan
---
http://www.astro.mech.tohoku.ac.jp/RAIKO/ (Japanese)

This 2U CubeSat includes experiments for:
+ Earth photography with a fish-eye lens camera
+ Photo tracking during deployment from ISS to measure relative
motion.
+ Experimental star sensor
+ Membrane deployment experiment for de-orbit
+ High speed data communication experiment by Ku-band
communication equipment:
o Orbit determination experiment by Doppler frequency
measurement of Ku-band beacon.
o Mobile ground station and global cooperation for reception

FITSAT-1 - Fukuoka Institute of Technology, Japan
---
http://www.fit.ac.jp/~tanaka/fitsat.shtml

The main mission of this 1U CubeSat will be a demonstration of high speed data transfer from a satellite. A second experiment aboard the satellite involves an attempt at visual tracking from the ground of the high-output LED flash to investigate the possibility of optical communication with satellites. The light from this flash will be received by the ground station equipped with a telescope with photo-multiplier linked to a parabolic antenna tracking the 5.8GHz downlink.

Frequencies announced for FITSAT-1:
CW Beacon 437.250 MHz,
FM Data 437.445 MHz,
High speed data 5840.00 MHz.

WE WISH - Meisei Electric Co., Ltd., Japan
---
http://www.meisei.co.jp/news/2011/0617_622.html

The WE WISH mission is to investigate monitoring of the global environment from space with the use of an upper atmosphere measurement experiment. This includes GPS technology, and technical proof of concept of a micro infra-red camera.

F-1 Vietnam Student CubeSat

Vietnamese students in Hanoi plan to orbit the country's first satellite, their amateur radio CubeSat F-1 with the callsign XV1VN. The satellite will carry a low resolution C328 camera and two Yaesu VX-3R transceivers using 145.980 and 437.485 MHz.

+ VX-3R1, 437.485 MHz FM downlink:
o Solar cell power only, operates in sunlight only
o Output power: max 0.3W, half-wave dipole antenna
o Morse code beacon (10 chars) using PWM CW every 30 seconds

+ VX-3R2, 145.980 MHz FM downlink:
o Rechargeable battery, operates in dark and sunlight
o Output power: max 1.0W, half-wave dipole antenna
o AFSK 1200bps, half duplex, one AX.25 packet every 30 seconds

TechEdSat - San Jose State University
---
http://ncasst.org/techedsat.html
http://www.uk.amsat.org/5018

TechEdSat is a 1U CubeSat built by San Jose State University in partnership with NASA Ames Research Center and AAC Microtec. It's mission is to evaluate Space Plug-and-play Avionics (SPA) designed in Sweden by AAC Microtec, and to perform a communications experiment utilizing the Iridium and Orbcomm satellite phone network.

TechEdSat has received IARU frequency coordination for its downlink on 437.465 MHz.

[ANS thanks the CubeSat teams, AMSAT-UK, and Mineo Wakita JE9PEL for the above information]

AMSAT News Podcasts Available to Download and Listen

The Houston AMSAT Net, hosted by Andy W5ACM, meets every Tuesday evening at 8PM Central Time (UTC-5). They read the ANS bulletins and any late breaking amateur satellite news that has come out since the weekend ANS news cycle.

The net is streamed live on the AMSAT Echolink Node and via an MP3 stream. The audio is also available as a podcast from the current net including an archive of past net podcasts.

Bruce KK5DO web page at http://www.amsatnet.com/ has the links to the podcasts (and live streaming information). Click on the "Listen to Live or Past Nets" link on the left side of the web page to find the links to the podcasts.

If you go to the iTunes store and search podcasts there for either kk5do, amsat or houston amsat net, you will find the same podcast able to be streamed right to your iPhone/iPad/iPod. Also, if you have an iPhone and you have downloaded the Echolink app, you can listen to the net live on Tuesdays at 8PM Central.

[ANS thanks Andy, W5ACM and Bruce, KK5DO for the above information]

Satellite Shorts From All Over

+ Amateur Radio Club K4BFT received good media coverage at Field Day this year operating near the Alabama Space and Rocket Center. Their satellite station has several shots in the article in the link below, including SatPC32. There were 3 local TV stations and 1 local newspaper that visited the Satellite Station this year. See:
http://photos.al.com/huntsville-times/2012/06/ham_field_day_9.html
(via Tim, N8DEU)

+ Hams like big antennas no matter what the operating mode. You'll enjoy the two videos "Moonbounce Swiss Style" when Sam Jewell G4DDK and John Worsnop G4BAO were shown round the HB9Q amateur radio moonbounce (EME) shack by Alex Artieda HB9DRI. Watch it at: http://www.southgatearc.org/news/june2012/moonbounce_swiss_style.htm

+ Listen to some dramatic music, watch a fast-paced video and see a few animated high-fives in the SpaceX video and the latest views of Dragon crew capsule: http://www.youtube.com/watch?feature=player_embedded&v=n8044mkvc

+ The latest updates to the CQ Newsroom has news of the STRaND-2 satellite program and the ARISS volunteer initiative, along with amateur radio news. You can read this online at: http://cqnewsroom.blogspot.com/

+ The Antenna Column by Kent Britain, WA5VJB in the Spring, 2012 issue of CQ VHF Magazine (http://www.cq-vhf.com) discusses "Herringbone Log Periodics plus Another AMSAT LEO Antenna." Select the link 'Click here for a look inside!' and you will find the link to a preview version of the magazine article.

+ Paul, 2M1EUB is making mobile satellite DX contacts from Scotland. He reports being to work K3SZH on FO-29. He plans to be on the air from Scotland until around July 8-9.

+ Wyatt, AC0RA worked Bill OM3BD/NZ5N in Slovakia on AO-7 at a distance of over 7800 kms. Bill wrote, "The QSO was remarkably easy, we talked to each other for over a minute with strong sigs. I was expecting maybe 15 seconds of a signal way down in the noise, but this was no sweat at all, and it was just our first attempt. This suggests that significantly longer distances are possible. The AO-7 orbit seems a bit different this summer, my North America windows are longer and extend deeper into the USA."

+ NASA/JPL posted an amazing video highlighting the incredible engineering feat it will be to land the Curiosity Rover onto the surface of Mars. Watch it at: http://www.youtube.com/watch?v=_Af_o9Q9s&feature=player_embedded

+ NASA Goddard Space Flight Center in Greenbelt, Maryland, invites you to try out their new, on-line game, called "Build it Yourself: Satellite!" This is a Flash-based game, a learning tool for students

and adults that plays in your browser window. See: http://www.jwst.nasa.gov/build.html

+ ARISS International Team meeting was held on Tuesday, June 19. Minutes have been posted: http://ariss.rac.ca/arisstel2012-06-19.htm

+ Plan Ahead! To celebrate Venezuelan Navy Day, members of the Grupo DX Caracas will be active as YW5B from La Blanquilla Island between July 11-16. Activity will be on 160-2 meters using CW, SSB, Satellites, FM and the Digital modes. (Ohio/Penn DX Bulletin No. 1065)

+ The next Hudson Valley Satcom net dates are on Thurs day July 5 and July 19 at 8PM EDT (UTC-4 UTC) on the 146.97 MHz MBARC Repeater (PL 100). The echolink connection has been experiencing problems so you are invited to send an e-mail to N2OXV at arrl.net to make sure that the N2EYH-L EchoLink node is available if you plan to join via this route. (Stu, WA2BSS)

[ANS thanks everyone for the above information]

/EX

In addition to regular membership, AMSAT offers membership in the President's Club. Members of the President's Club, as sustaining donors to AMSAT Project Funds, will be eligible to receive additional benefits. Application forms are available from the AMSAT Office.

Primary and secondary school students are eligible for membership at one-half the standard yearly rate. Post-secondary school students enrolled in at least half time status shall be eligible for the student rate for a maximum of 6 post-secondary years in this status. Contact Martha at the AMSAT Office for additional student membership information. And with that please keep in mind the time a neutron goes into a cafe and asks the waiter, "How much for lunch?" The waiter replies, "For you, no charge." Just outside, two atoms are walking down the street and they run in to each other. One says to the other, "Are you all right?" "No, I lost an electron!" "Are you sure?" "Yeah, I'm positive!"

73,
This week's ANS Editor,
JoAnne Maenpaa, K9JKM

97. Crossposting Permitted to rec.radio.amateur.moderated

Newsgroup: rec.radio.amateur.space
Date: 2012-07-01 06:00:04 UTC
From: rram@panix.com
Message-ID: <radio/ham-radio/moderated/crossposting-1-1341122402@panix.com>
Source record: 147
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space,rec.radio.info

```
Posted-By: auto-faq 3.3.2 beta (PGPMoose V2.0, Perl 5.005)
Archive-name: radio/ham-radio/moderated/crossposting
Revision: 1.2 2011/11/02 04:08:53
Posting-Frequency: posted monthly
URL: http://www.panix.com/~rram/usenet/rram/index.html

Changes followed by "|".

After a 30-day public discussion and feedback period to gauge reader
opinions in March of 2009:

http://groups.google.com/group/rec.radio.amateur.moderated/browse_thread/thread/d7d337db35
f23326

the rec.radio.amateur.moderated Moderation Team had decided to consider |
amending its charter, and permit limited simultaneous crossposting to
rec.radio.amateur.moderated and one other unmoderated
amateur-radio-related discussion newsgroup. After a successful trial |
period (90 days, through early July 2009), we decided to adopt this |
change permanently. |

Approved rec.radio.amateur.* newsgroups are those that are currently
listed in the latest version of the "List of Big Eight Newsgroups" which
is crossposted monthly to news.announce.newgroups, news.groups, and
news.lists.misc.

Approved alt.radio.amateur.* and alt.ham-radio.* newsgroups are those
that have been created consistent with the suggestions in "So You Want
to Create an Alt Newsgroup" at:

http://www.faqs.org/faqs/alt-creation-guide/

Approved regional hierarchy newsgroups are those that contain either
"radio.amateur" or "ham-radio" in their names, including
uk.radio.amateur and aus.radio.amateur.misc.

We will make every reasonable effort to keep our list of approved
newsgroups up-to-date. In case we have overlooked any, and a submission
is rejected in error as a result, the rejected submitter can E-mail us
at our administrative contact address (in the signature at the bottom of
this article, and the default Reply-To for the rejection message)
requesting that it be added, and that the article be approved. We may
still choose to reject articles crossposted to any alt.* newsgroup with
an inappropriate name, including obscene language, embedded
name-calling, or encouragement of unlawful conduct.
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Please direct any comments, questions, or criticisms to
rec-radio-amateur-moderated-request@panix.com.

98. Weekly Highlights of Solar and Geomagnetic Activity, 25 June - 01 July 2012

Newsgroup: rec.radio.amateur.space
Date: 2012-07-02 15:30:08 UTC
From: SWPC.Webmaster@noaa.gov
Message-ID: <20120702153001.F257633C91@panix2.panix.com>
Source record: 148
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.dx,rec.radio.amateur.space,rec.radio.shortwave,rec.radio.info

```
:Product: Weekly Highlights and Forecasts
:Issued: 2012 Jul 02 1331 UTC
# Prepared by the US Dept. of Commerce, NOAA, Space Weather Prediction Center
# Product description and SWPC contact on the Web
# http://www.swpc.noaa.gov/weekly.html
#
# Weekly Highlights and Forecasts
#
Highlights of Solar and Geomagnetic Activity
25 June - 01 July 2012

Solar activity was low to moderate during the week. The first three
days of the period were marked by low level C-class x-ray flares,
the largest of which was a C4/Sf from Region 1512 (S16, L=264,
class/area Dki/290 on 29 June) on 28 June at 0452Z. Region 1512 was
soon overshadowed by Region 1513 (N16, L=218, class/area Dao/120 on
01 July), which produced an impulsive M2/1b flare on 28 June at
1612Z. Subsequently, Region 1513 produced at least one impulsive
M-class event each day for the remainder of the week, the largest of
which was an M2.8/Sb on 01 July at 1918Z. While Region 1513 was the
most prolific flare producer of the regions on the disk, it was
dwarfed in area by Region 1515 (S17, L=204, class/area Ekc/850 on 01
July). Region 1515 appeared on the disk on 27 June and by 01 July
had quadrupled in area. Both Regions 1513 and 1515 ended the week
with beta-gamma magnetic characteristics. There were several CMEs
observed during the week, however none were determined to be
geoeffective.

No proton events were observed at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit began
the period at high levels before decreasing to moderate levels early
on 25 June. Moderate levels continued throughout the week,
increasing to high levels on 01 July at 1320Z.

Geomagnetic field activity ranged from quiet to active levels, with
isolated minor to major storm levels observed at high latitudes late
in the period. The geomagnetic field was at mostly quiet levels from
25-29 June. By 2100Z on 29 June, the phi angle at the ACE spacecraft
switched from positive to negative polarity, indicating the arrival
of the corotating interaction region. Solar wind speed at the ACE
spacecraft, which had ranged between 350-500 km/s during the week,
increased to 700 km/s by 30/1800Z as a coronal hole high speed
stream (CH-HSS) became geoeffective. Concurrently, the Bz component
```

of the interplanetary magnetic field turned southward, eventually dipping to -10 to -12 nT while Bt reached 14nT before decreasing to 7 nT by mid-day on 30 June. The geomagnetic field responded with unsettled to active levels for the remainder of the period. Minor to major storm levels were observed at high latitudes during 30 June-01 July.

Forecast of Solar and Geomagnetic Activity
02 July - 28 July 2012

Solar activity is expected to be at low to moderate levels, with more M-class events from Regions 1513 and 1515 likely through 09 - 10 July.

No proton events are expected at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit is expected to be at high levels through 08 July and from 17-21 July.

Geomagnetic field activity is expected to begin at unsettled to active levels, decreasing to mostly quiet to unsettled levels after 03 July until another CH-HSS becomes geoeffective on 27 - 28 July.

99. WSR-184 AMSAT Weekly Satellite Report

Newsgroup: rec.radio.amateur.space
Date: 2012-07-03 16:23:49 UTC
From: JoAnne Maenpaa <k9jkm@comcast.net>
Message-ID: <003101cd5937$8131cb90$839562b0$@net>
Source record: 149
Cross-posted to: rec.radio.amateur.space,rec.radio.info

```
This report is organized into four (4) parts.
Part 1 (S1) - operational analog amateur satellites
Part 2 (S2) - operational digital amateur satellites
Part 3 (S3) - non - operational satellites
Part 4 (S4) - deborbited/returned satellites

SB SAT @ AMSAT W8ISS $WSR-184.S1
WSR 184 Part 1 07/02/2012

AMSAT NEWS SERVICE BULLETIN 184.S1
FROM AMSAT HQ SILVER SPRING, MD, July 02, 2012
TO ALL RADIO AMATEURS
BID: $WSR-184.S1

PW-Sat
Catalog Number:
Launch Date: Febrauary 13, 2012
Launch Site: Kourou, French Guiana

Status: On Orbit

Uplink: 435.020 MHz FM
Downlink: 145.900 MHz DSB

Beacon:

Callsign:

URL:

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=132
[03162012]
=====
DO-64 Delfi-C3
Catalog number: 32789
Launch Date: April 28, 2008 0354z
Launch site: Satish Dhawan Space Centre, India

Status: Operational
Current Mode: Science Mode - Beacon ONLY

Telemetry: 145.870 MHz

Downlink: 145.880 to 145.920 MHz
Uplink: 435.530 to 435.570 MHz
```

Delfi-C3 web page: http://www.delfic3.nl/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=68
[02092011]
=====
VO-52 HAMSAT
Catalog number: 28650
Launch Date: May 05, 2005 0444z
Launch site: Satish Dhawan Space Centre, India

Status: Operational
Current Mode: U/v - Dutch Transponder

Frequencies:
Indian Transponder:
Uplink: 435.220 to 435.280 MHz LSB/CW
Downlink: 145.930 to 145.870 MHz USB/CW

Dutch Transponder:
Uplink: 435.225 to 435.275 MHz LSB/CW
Downlink: 145.925 to 145.875 MHz USB/CW

Indian Beacon: 145.9360 MHZ CW
Dutch Beacon: 145.860 MHz 12WPM with CW message

Mode and Antenna Polarization:
V: LHCP
U: RHCP

Official Webpage: http://www.amsatindia.org/hamsat.htm

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=30

To know what transponder is switched on please listen for the beacon
that is active. Each transponder has a different beacon.
[03232012]
=====
SO-50 SAUDISAT-1C
Catalog number: 27607
Launch date: December 20, 2002 1700z
Launch site: Baikonur, Kazakhstan

Status: Operational

Current Mode: V/u

Uplink: 145.850 MHz FM - 67.0 Hz PL tone
Downlink: 436.795 MHz

Mode and Antenna Polarization:
V: Linear
U: Linear

Official Webpage: http://saudisat.kacst.edu.sa/index.shtml
(not up and running currently)

To switch the transmitter on, you need to send a CTCSS tone of 74.4
Hz. The order of operation is thus: (allow for Doppler as necessary):
1) Transmit on 145.850 MHz with a tone of 74.4 Hz to arm the 10 minute
timer on board the spacecraft.
2) Now transmit on 145.850 MHz (FM Voice) using 67.0 Hz to PT the re-
peater on and off within the 10 Minute window.
3) Sending the 74.4 tone again within the 10 minute window will reset
the 10 minute timer.
[02092011]
=====
FO-29 JAS-2
Catalog number: 24278
Launch Date: August 17, 1996

Status: Operational
Current Mode: V/u (Mode JA)

Voice/CW (Mode JA)
Uplink: 145.90 to 146.00 MHz CW/LSB
Downlink: 435.80 to 435.90 MHz CW/USB
Beacon: 435.795 MHz

Digital Mode JD
Uplinks: 145.850 MHz FM
145.870 MHz FM
145.910 MHz FM
Downlink: 435.910 MHz 1200-baud BPSK or 9600-baud FSK
Callsign: 8J1JCS
Digitalker: 435.910 MHz

Mode and Antenna Polarization:
V: RHCP
U: RHCP

For current operational schedule for FO-29:
http://www.ne.jp/asahi/m-arai/gkz/satinfo/fo29e.htm

JARL English webpage:
http://www.jarl.or.jp/English/5_Fuji/ejasmenu.htm

AMSAT-NA Webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID
=5&retURL=/satellites/status.php

Mineo Wakita, JE9PEL, has created a simple decoder program for FO29's
CW telemetry downlink: http://www.ne.jp/asahi/hamradio/je9pel/
fo29cwts.htm
[01122012]
=====
AO-27 AMRAD
Catalog number: 22825

Launch date: September 26, 1993 0140z
Launch site: Kourou, French Guiana

Status: Operational

Current Mode: V/u

Uplink: 145.850 MHz FM
Downlink: 436.797 MHz FM

Mode and Antenna Polarization:
V: Linear
U: Linear

Official Webpage: http://www.ao27.org
[02092011]
=====
AO-7 AMSAT OSCAR 7
Catalog number: 07530
Launch Date: November 15, 1974
Launch site: Vandenberg AFB, California, USA

Status: Operational

Current Mode: Alternating between Mode A and B every 24 hours

Uplink: 145.850 to 145.950 MHz CW/USB Mode A
432.125 to 432.175 MHz CW/LSB Mode B
Downlink: 29.400 to 29.500 MHz CW/USB Mode A (1W PEP)
145.975 to 145.925 MHz CW/USB Mode B (8W PEP)
145.975 to 145.925 MHz CW/USB Mode C (2W PEP)
Beacons: 29.502 MHz CW
145.972 MHz CW
435.100 MHz CW
2304.100 MHz CW

Official Webpage:
http://www.amsat.org/amsat-new/satellites/sat_summary/ao7.php
[04242012]
=====
INTERNATIONAL SPACE STATION (ISS) - ARISS
Catalog number: 25544
Launch date: November 20, 1998 0640z (ZARYA module)
Launch sites: Baikonur, Kazakhstan
Kourou, French Guiana
Uchinoura Space Center, Japan
Kennedy Space Center, Titusville, Florida, USA

Status: Operational

Current Active Modes: FM Repeater - OFF
Voice - V/v
BBS - U/u
2m APRS - OFF

70cm APRS - ON
70cm Digi - ON
SSTV - OFF

Expedition 32 Crew (July 2012 - November 2012):
Commander: Gennady Padalka RN3DT
Flight Engineer: Joe Acaba KE5DAR
Flight Engineer: Sergei Revin RN3BS
Flight Engineer:
Flight Engineer:
Flight Engineer:

Available Modes and Frequencies:
Digital/APRS:
Worldwide 2m packet uplink: 145.825 MHz FM 1k2
Worldwide 2m packet downlink: 145.825 Mhz FM 1k2
Worldwide 70cm packet downlink: 437.550 Mhz FM 1k2
Worldwide 70cm packet downlink: 437.550 Mhz FM 1k2

Voice:
Region 1 voice uplink: 145.200 MHz FM
Region 2/3 voice uplink: 144.490 MHz FM
Worldwide downlink: 145.800 MHz FM

Crossband Repeater:
Repeater Uplinks: 1269.650 MHz FM
437.800 MHz FM
145.990 MHz FM - 67.0 PL (Kenwood)
Repeater Downlink: 145.800 MHz FM
437.800 MHz FM (Kenwood)

SSTV Robot 36:
Downlink: 145.800 MHz FM

Mode and Antenna Polarization:
V: Linear
U: Linear

Callsigns:
Belgian: OR4ISS
German: DP0ISS
Russian: RS0ISS
RZ3DZR
United States: NA1SS
2m Packet Mailbox: RS0ISS-11
2m Digipeater alias: ARISS
70cm Packet Mailbox: RS0ISS-1
70cm Digipeater callsign: RS0ISS
70cm Digipeater alias: ARISS

Official ARISS Webpage: http://www.rac.ca/ariss
ISS Fan Club Webpage: http://www.issfanclub.com
APRS tracking page: http://www.ariss.net/

ISS Daily Crew Schedule: http://spaceflight.nasa.gov/station/timelines
Remember that the crew operates on UTC time. Also, all of the time
line is NOT translated from Russian and posted.
[07022012]
NNNN
/EX

SB SAT @ AMSAT W8ISS $WSR-184.S2
WSR 184 Part 2 07/02/2012

AMSAT NEWS SERVICE BULLETIN 184.S2
FROM AMSAT HQ SILVER SPRING, MD, July 02, 2012
TO ALL RADIO AMATEURS
BID: $WSR-184.S2

HORYU-II
Catalog number: 38340
Launch Date: May 17, 2012

Status; On Orbit

Uplink: 145.??? MHz
Downlink: 437.375 MHz CW/AX25/FSK

Beacon: 437.375 MHz CW

Callsign: JG6YBW

URL:

IARU Coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=216
[05282012]
=====
XaTcobeo
Catalog Number: 38082
Launch Date: Febrauary 13, 2012
Launch Site: Kourou, French Guiana

Status: Operational

Uplink:
Downlink: 437.365 MHz FFSK with AX.25

Beacon:

Callsign:

URL:

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=135
[03162012]
=====
UniCubeSat
Catalog Number:

Launch Date: Febrauary 13, 2012
Launch Site: Kourou, French Guiana

Status: Operational

Uplink:
Downlink: 437.305 MHz 9k6 bps FSK

Beacon:

Callsign:

URL:

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=133
[03162012]
=====
Robusta
Catalog Number:
Launch Date: Febrauary 13, 2012
Launch Site: Kourou, French Guiana

Status: On Orbit

Uplink:
Downlink: 437.325 MHz 1k2 FM telemetry (data every 1 min, 20 sec. burst)

Beacon:

Callsign:

URL:

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=122
[02142012]
=====
MO-72 MaSat-1
Catalog Number: 38081
Launch Date: Febrauary 13, 2012
Launch Site: Kourou, French Guiana

Status: Operational

Uplink:
Downlink: 437.345 MHz GFSK 625/1250 bps
437.345 MHz CW

Beacon:

Callsign:

URL:

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=126
[03232012]
=====
Goliat
Catalog Number: 38085
Launch Date: Febrauary 13, 2012
Launch Site: Kourou, French Guiana

Status: Operational

Uplink:
Downlink: 437.485 MHz 1k2 AFSK

Beacon:

Callsign:

URL:

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=98
[03162012]
=====
E-Star
Catalog Number: 38079
Launch Date: Febrauary 13, 2012
Launch Site: Kourou, French Guiana

Status: On Orbit

Uplink:
Downlink: 437.445 MHz 1k2 bps AFSK

Beacon:

Callsign:

URL:

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=130
[03232012]
=====
ALMASat1
Catalog Number: 38078
Launch Date: Febrauary 13, 2012
Launch Site: Kourou, French Guiana

Status: On Orbit

Uplink:
Downlink: 437.465 MHz 1k2 bps FSK
2407.850 MHz

Beacon:

Callsign:

URL:

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=39
[02212012]
=====
RS-39 Chibis-M
Catalog Number: 37841
Launch Date: October 30, 2011 10:11:00 UTC
Launch site: Tyuratam (Baikonur Cosmodrome), Kazakhstan

Status: Operational

Uplink:
Downlink:

Beacon: 435.315 MHz CW
435.215 MHz CW

Callsign:

URL:

IARU coordination status page:
[01122012]
=====
JUNGU
Catalog Number: 37841
Launch Date: October 12, 2011 05:30:00 UTC
Launch site: Satish Dhawan Space Centre, India

Status: On Orbit

Uplink: 145.??? MHz 1k2 (mode?)
Downlink: 437.505 MHz 9k6 (mode?)

Beacon: 437.275 MHz 15 wpm (?) CW

Callsign:

URL: http://www.iitk.ac.in/me/jugnu/index.htm

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=160
[01122012]
=====
SRMSAT
Catalog Number: 37839
Launch Date: October 12, 2011 05:30:00 UTC
Launch site: Satish Dhawan Space Centre, India

Status: On Orbit

Uplink: 145.900 MHz 1k AX.25 (speed?)
Downlink: 437.500 MHz 2k4 AX.25

Beacon: 437.425 MHz 12 wpm CW

Callsign:

URL: http://srmsat.in/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=181
[01122012]
=====
HRBE (E1P Explorer 1 [Prime] CubeSat (E1P-U2))
Catalog Number: 37855
Launch Date: October 28, 2011
Launch site: Vandenberg Air Force Base, California, USA

Status: On Orbit

Uplink: 437.305 MHz (???)
Downlink: 437.505 MHz AX.25 (SSB?)

Beacon:

Callsign:

URL: http://ssel.montana.edu/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=116
[01122012]
=====
M-Cubed
Catalog Number: 37855
Launch Date: October 28, 2011
Launch site: Vandenberg Air Force Base, California, USA

Status: On Orbit

Uplink:
Downlink: 437.485 MHz AX.25

Beacon:

Callsign:

URL: http://umcubed.org/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=215
[01122012]
=====
RAX-2
Catalog Number: 37853
Launch Date: October 28, 2011

Launch site: Vandenberg Air Force Base, California, USA

Status: Operational

Uplink:
Downlink: 437.345MHz 9k6 GMSK

Beacon:

Callsign:

URL: http://rax.engin.umich.edu//

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=221
[03232012]
=====
AO-71 AubieSat-1
Catalog Number: 37854
Launch Date: October 28, 2011
Launch site: Vandenberg Air Force Base, California, USA

Status: On Orbit

Uplink:
Downlink: 437.475 MHz 1k2 AX.25

Beacon: 437.475 MHz CW

Callsign: KI4NQO

URL: http://www.space.auburn.edu/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=148
[12262011]
=====
O/OREOS
Catalog Number: 37224
Launch Date: November 20, 2010
Launch site: Kodiak Launch Complex, Alaska, USA

Status: On Orbit

Uplink:
Downlink: 437.035 MHZ AX.25

Beacon:

Callsign:

URL: http://www.ooreos.org/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=146
[02092011]

=====
Rax-1 Radio Aurora Explorer
Catalog Number: 37223
Launch Date: November 20, 2010
Launch site: Kodiak Launch Complex, Alaska, USA

Status: On Orbit

Uplink:
Downlink: 437.505 MHz 9k6 GMSK

Beacon:

Callsign: RAX-1

URL: http://rax.engin.umich.edu/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=165
[02092011]
=====
FO-69 Fastrac-1 Sara Lily
Catalog Number: 37227
Launch Date: November 20, 2010
Launch site: Kodiak Launch Complex, Alaska, USA

Status: Operational

Uplink 1: 145.980 MHz 1k2 baud
Uplink 2: 145.825 MHz 1k2 baud
Downlink: 437.345 MHz 1k2 and 9k6 baud

Beacon: 437.435 MHz 1k2 AX.25

Callsign: Fast1

URL: http://fastrac.ae.utexas.edu/index.php

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=83
[07052011]
=====
FO-70 Fastrac-2 Emma
Catalog Number: 37380
Launch Date: November 20, 2010
Launch site: Kodiak Launch Complex, Alaska, USA

Status: Operational

Uplink 1: 435.025 MHz 1k2 baud
Uplink 2: 437.435 MHz 9k6 baud
Downlink: 145.825 MHz 1k2 and 9k6 baud

Beacon: 145.825 MHz 1k2 AX.25

Callsign: Fast2

URL: http://fastrac.ae.utexas.edu/index.php

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=84
[12162011]
=====
StudSat
Catalog Number: 36796
Launch Date: July 12, 2010 0352z
Launch site: Satish Dhawan Space Centre, India

Status: On Orbit

Uplink: 437.505MHz, 9600bps FSK
Downlink: 437.505MHz, 9600bps FSK
Beacon : 437.505MHz, 20bps ASK

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=164
[02092011]
=====
TIsat-1
Catalog Number: 36799
Launch Date: July 12, 2010 0352z
Launch site: Satish Dhawan Space Centre, India

Status: On orbit

Callsign: HB9DE

Uplink: 145.980MHz FM, AFSK
Downlink: 437.305MHz FM, AFSK
Beacon: 437.305MHz CW

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=118
[02092011]
=====
SwissCube
Catalog Number: 35932
Launch Date: September 23, 2009 0621z
Launch site: Satish Dhawan Space Centre, India

Status: Operational

Callsign: HB9EG

Beacon(100mw): 437.5050MHz CW
Beacon(1w): 437.5050MHz FSK 1k2bps

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=109
[02092011]

=====
UWE-2
Catalog Number: 35934
Launch Date: September 23, 2009 0621z
Launch site: Satish Dhawan Space Centre, India

Status: In Orbit

Beacon(500mw): 437.3850 MHz AFSK 1k2bps
437.3850 MHz FSK 9k6bps

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=110
[02092011]
=====
ITUpsAT1
Catalog Number: 35935
Launch Date: September 23, 2009 0621z
Launch site: Satish Dhawan Space Centre, India

Status: Operational

Beacon(100mw): 437.325MHz CW
Beacon(1w): 437.325MHz 19k2bps

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=113
[02092011]
=====
BEESAT
Catalog Number: 35933
Launch Date: September 23, 2009 0621z
Launch site: Satish Dhawan Space Centre, India

Status: Operational

Callsign: DP0BEE

Beacon(100mw): 436.000MHz CW
Beacon(500mw): 436.000MHz GMSK 4k8bps
Beacon(500mw): 436.000MHz GMSK 9k6bp
[02092011]
=====
CP-6
Catalog Number: 35004
Launch Date: May 19, 2009 2355z
Launch site: Wallops Island, Virginia, USA

Status: Operational

Downlink: 437.365 MHz 1k2 AFSK

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=121

[01122012]
=====
HAWKSAT 1
Catalog number: 35003
Launch Date: May 19, 2009 2355z
Launch site: Wallops Island, Virginia, USA

Status: operational

Downlink: 437.345 MHz ?

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=105
[01122012]
=====
Pharmasat
Catalog Number: 35002
Launch Date: May 19, 2009 2355z
Launch site: Wallops Island, Virginia, USA

Status: Operational

Downlink: 437.465 MHz 1k2 AFSK

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=94
[02092011]
=====
ANUSAT
Catalog Number: 34808
Launch Date: April 20, 2009 0115z
Launch Site: Satish Dhawan Space Centre, India

Status: ?

Downlink: 435.000 MHz
Uplink: 145.800 MHz

Telemetry: 137.400 MHz
[02092011]
=====
SOHLA-1 (ASTRO TECH.)
Catalog Number: 33496
Launch Date: January 23, 2009 0354z
Launch site: Tanegashima Space Center, Japan

Status: Operational

Proposed Frequencies and Modes:
Downlink: 437.505 MHz AFSK/CW
Beacon: 437.505 MHz AFSK/CW

Callsign:

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=101
[02092011]
=====
KAGAYAKI (Solan Co.)
Catalog Number: 33495
Launch Date: January 23, 2009 0354z
Launch site: Tanegashima Space Center, Japan

Status: In Orbit

Downlink: 437.375 MHZ FSK9k6/CW
Beacon: 437.375 MHz FSK9k6/CW

IARU coordination status page:

AMSAT-NA webpage:

[02092011]
=====
STARS (Kagawa Univ.) (Twin Satellites)
Catalog Number: 33498
Launch Date: January 23, 2009 0354z
Launch site: Tanegashima Space Center, Japan

Status: Operational ?

Downlinks: 437.485 MHz FM/CW
437.465 MHz FM/CW
Beacons: 437.305 MHz FM/CW
437.275 MHz FM/CW

Callsigns: JR5YBN
JR5YBO

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=99

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID=121&retURL
=/satellites/status.php
[02092011]
=====
KKS-1 (Tokyo MCIT)
Catalog Number: 33499
Launch Date: January 23, 2009 0354z
Launch site: Tanegashima Space Center, Japan

Status: Operational

Downlink: 437.455 MHz AFSK/CW
Beacon: 437.385 MHz AFSK/CW

Callsign: JQ1YYY

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=107

AMSAT-NA webapge:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID=120&retURL
=/satellites/status.php
[20092011]
=====
PRISM (Tokyo Univ.)
Catalog Number: 33493
Launch Date: January 23, 2009 0354z
Launch site: Tanegashima Space Center, Japan

Status: Operational ?

Downlink: 437.425 MHz AFSK/GMSK/CW
Beacon: 437.250 MHz AFSK/GMSK/CW

Callsign: JQ1YCX

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=97

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID=119&retURL
=/satellites/status.php
[02092011]
=====
RS-30 Radio Sputnik 30 (Yubileiny)
Catalog Number: 32953
Launch Date: May 23, 2008 1520z
Launch site: Plesetsk Missile and Space Complex, Russia

Status: Operational

Curent Modes: Telemetry
Audio
Images

Downlinks: 435.315 MHz
435.215 MHz

AMSAT-NA website:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID=115&ret
URL=/satellites/status.php

Official website:
http://www.npopm.com/?cid=leoca&caid=43
[02092011]
=====
CanX-2
Catalog number: 32790
Launch Date: April 28, 2008 0354z
Launch site: Satish Dhawan Space Centre, India

Status: Operational in range of ground station only

Downlink: 437.478 MHz GFSK

For the latest project status update please visit the Can X-2 web
page: http://www.utias-sfl.net/nanosatellites/CanX2/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=46
[02092011]
=====
AAUSAT-II
Catalog number: 32788
Launch Date: April 28, 2008 0354z
Launch site: Satish Dhawan Space Centre, India

Status: Operational

Downlink: 437.425 MHz 1k2 baud packet

For the latest project status update please visit the AAUSAT-II web
page:
http://www.aausatii.aau.dk/homepage/index.php?language=en&page=home

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=60
[02092011]
=====
CO-65 CUTE-1.7+APD II
Catalog number: 32785
Launch Date: April 28, 2008 0354z
Launch site: Satish Dhawan Space Centre, India

Status: Operational

Downlink: 437.475 MHz 9k6 Packet
Uplink: 1267.600 Mhz

Telemetry Beacon:
Downlink: 437.2750 MHz CW

For the latest project status update please visit the Cute-1.7+APD II
web page: http://lss.mes.titech.ac.jp/ssp/cute1.7/index_e.html

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=78

Command Station blog website:
http://lss.mes.titech.ac.jp/ssp/cute1.7/blog/

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID=112&retURL
=/satellites/status.php
[03232012]
=====
Compass-1

Catalog number: 32787
Launch Date: April 28, 2008 0354z
Launch site: Satish Dhawan Space Centre, India

Status: Operational

Current Mode: dependant on last received command

Uplink: 145.980 MHz FM
Downlink: 437.275 Mhz CW
437.405 MHz Packet

For the latest project status update please visit the Compass 1 web
page: http://www.raumfahrt.fh-aachen.de/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=52

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID=114&retURL
=/satellites/status.php
[06162011]
=====
CO-66 Seeds II
Catalog number:
Launch Date: April 28, 2008 0354z
Launch site: Satish Dhawan Space Centre, India

Status: Operational

Downlink: 437.485 MHz

Callsign: JQ1YGU

For the latest project status update please visit the Seeds 2 web
page: http://cubesat.aero.cst.nihon-u.ac.jp/english/seeds_2_e.html

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=36

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID=113&retURL
=/satellites/status.php
[02092011]
=====
CAPE-1
Catalog Number: 31130
Launch Date: April 17,2007 0702z
Launch site: Baikonur, Kazakhstan

Status: Intermittent

Current Mode: /u

TLM Downlink: 435.245 MHz 9600 bs FSK AX.25
CW Beacon: 435.245 MHz CW

Callsign: K5USL

TLM and CW interchange every 30 seconds.

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID=94&retURL=
/satellites/status.php

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=72
[02092011]
=====
CP3
Catalog Number: 31129
Launch Date: April 17,2007 0702z
Launch site: Baikonur, Kazakhstan

Status: Operational

Current Mode: /u

Downlink: 436.845 MHz 1200 bps AFSK AX.25

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=74
[02092011]
=====
CO-58 CubeSat XI-V
Catalog number: 28895
Launch Date: October 27, 2005 0652z
Launch site: Plesetsk Missile and Space Complex, Russia

Status: Operational - CW Beacon only

Current Mode: /u

Telemetry Downlink: 437.4250 MHz AFSK 1200bps using AFK protocol
Beacon: 437.2750 MHz CW

Callsign: JQ1YGW

Official Webpage: http://www.space.t.u-tokyo.ac.jp/cubesat/mission/V/

Pictures received by Mineo Wakita - JE9PEL:
http://www.ne.jp/asahi/hamradio/je9pel/xivpicte.htm

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=37
[02092011]
=====
CO-57 CubeSat XI-IV
Catalog number: 27848
Launch date: June 30, 2003 1415z

Launch site: Plesetsk Missile and Space Complex, Russia

Status: ?????

Current Mode: /u

Beacon: 436.8475 MHz CW
Telemetry : 437.4900 MHz AFSK 1200 BPS

Callsign: JQ1YGW

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID=96&retURL
=/satellites/status.php

Official Webpage: http://www.space.t.u-tokyo.ac.jp/cubesat/mission/V/
[02092011]
=====
QuakeSat
Catalog Number: 27845
Launch Date: June 30, 2003 1415z
Launch site: Plesetsk Missile and Space Complex, Russia

Status: Telemetry only

Current Mode: 9600 baud data packet

Mode U packet
Downlink: 436.675 MHz 9k6 BPS

Quakesat webpage:
http://www.quakefinder.com/services/quakesat-ssite/
[02252011]
=====
CO-55 Cute-1.7+APD II
Catalog Number: 27844
Launch date: June 30, 2003 1415z
Launch site: Plesetsk Missile and Space Complex, Russia

Status: Operational

Current Mode: CW downlink worldwide
AX25 Packet with uplink command over Japan only

Mode U Telemetry
Downlink: 437.4000 MHz AFSK 1200 BPS

Mode U TLM Beacon
Downlink: 436.8375 MHz CW

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID=69&retURL
=/satellites/status.php

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=78
[02092011]
=====
NO-44 PCSAT
Catalog number: 26931
Launch Date: September 30, 2001 0240z
Launch site: Kodiak Launch Complex, Alaska, USA

Status: Telemetry only

Current Mode: V/v

General Usage Uplink/Downlink: 145.827 MHz 1200 Baud
Special Usage Downlink: 144.390 Mhz 1200 Baud

PCSAT APRS page: http://pcsat.aprs.org

aprstlm Telemetry Decoder program:
http://www.xciv.org/~iain/aprstlm/v1.2/
[02092011]
=====
RS-22 RADIO SPORT 22 (MOZHAYETS 4)
Catalog number: 27939
Launch Date: September 27, 2003 0612z
Launch site: Plesetsk Missile and Space Complex, Russia

Status: Operational - 70cm cw only

Current Mode: /u

CW Beacon - 435.352 MHz
145.818 MHz

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID=76&retURL
=/satellites/status.php
[02092011]
=====
LO-19 LUSAT
Catalog number: 20442
Launch date: January 22, 1990
Launch site: Kourou, French Guiana

Status: CW Beacon only

Uplinks: 145.840 MHz 1200-baud Manchester FSK
145.860 MHz 1200-baud Manchester FSK
145.880 MHz 1200-baud Manchester FSK
145.900 MHz 1200-baud Manchester FSK

CW downlink: 437.125 MHz

Digital downlink: 437.150 MHz SSB (RC-BPSK 1200-baud PSK)

Broadcast Callsign: LUSAT-11
BBS: LUSAT-12

General information and telemetry samples can be found at:
www.telecable.es/personales/ea1bcu
[02092011]
=====
UO-11 OSCAR-11
Catalog number: 14781
Launch Date: March 1, 1984
Launch site: Vandenburg AFB, California, USA

Status: Operational ?

Current Mode: /v

Telemetry Downlink: 145.825 MHz FM 1200 AFSK
UHFBeacon: 435.025 MHz
Mode-S Beacon: 2401.500 MHz

Mode and Antenna Polarization:
V: RHCP
S: LHCP

Webpage: http://www.users.zetnet.co.uk/clivew/
MPEG3 files: http://www.ne.jp/asahi/hamradio/je9pel/uo11tlme.htm
[07052011]
=====
INTERNATIONAL SPACE STATION (ISS) - ARISS
Catalog number: 25544
Launch date: November 20, 1998 0640z (ZARYA module)
Launch sites: Baikonur, Kazakhstan
Kourou, French Guiana
Uchinoura Space Center, Japan
Kennedy Space Center, Titusville, Florida, USA

Status: Operational

Current Active Modes: FM Repeater - OFF
Voice - V/v
BBS - U/u
2m APRS - OFF
70cm APRS - ON
70cm Digi - ON
SSTV - OFF

Expedition 32 Crew (July 2012 - November 2012):
Commander: Gennady Padalka RN3DT
Flight Engineer: Joe Acaba KE5DAR
Flight Engineer: Sergei Revin RN3BS
Flight Engineer:
Flight Engineer:
Flight Engineer:

Available Modes and Frequencies:
Digital/APRS:
Worldwide 2m packet uplink: 145.825 MHz FM 1k2
Worldwide 2m packet downlink: 145.825 Mhz FM 1k2
Worldwide 70cm packet downlink: 437.550 Mhz FM 1k2
Worldwide 70cm packet downlink: 437.550 Mhz FM 1k2

Voice:
Region 1 voice uplink: 145.200 MHz FM
Region 2/3 voice uplink: 144.490 MHz FM
Worldwide downlink: 145.800 MHz FM

Crossband Repeater:
Repeater Uplinks: 1269.650 MHz FM
437.800 MHz FM
145.990 MHz FM - 67.0 PL (Kenwood)
Repeater Downlink: 145.800 MHz FM
437.800 MHz FM (Kenwood)

SSTV Robot 36:
Downlink: 145.800 MHz FM

Mode and Antenna Polarization:
V: Linear
U: Linear

Callsigns:
Belgian: OR4ISS
German: DP0ISS
Russian: RS0ISS
RZ3DZR
United States: NA1SS
2m Packet Mailbox: RS0ISS-11
2m Digipeater alias: ARISS
70cm Packet Mailbox: RS0ISS-1
70cm Digipeater callsign: RS0ISS
70cm Digipeater alias: ARISS

Official ARISS Webpage: http://www.rac.ca/ariss
ISS Fan Club Webpage: http://www.issfanclub.com
APRS tracking page: http://www.ariss.net/

ISS Daily Crew Schedule: http://spaceflight.nasa.gov/station/timelines
Remember that the crew operates on UTC time. Also, all of the time
line is NOT translated from Russian and posted.
[07022012]
NNNN
/EX

SB SAT @ AMSAT W8ISS $WSR-184.S3
WSR 184 Part 3 07/02/2012

AMSAT NEWS SERVICE BULLETIN 184.S3
FROM AMSAT HQ SILVER SPRING, MD, July 02, 2012

TO ALL RADIO AMATEURS
BID: $WSR-184.S3

THE FOLLOWING ARE IN ORBIT BUT ARE NON-OPERATIONAL AT THIS TIME:

NANOSAIL-D
Catalog Number: 37361(?)
Ejection Date: January 17, 2011

Status: Non - Operational

Downlink: 437.270 MHz AX.25

URL: http://nanosaild.engr.scu.edu/dashboard.htm

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=115
[04302012]
=====
HO-68 HOPE-1 (CAS-1)(XW-1)
Catalog Number: 36122
Launch Date: December 15, 2009 0231z
Launch site: Taiyuan Space Center, PRC

Status: Telemetry only

Callsign:
Broadcast: BJ1SA-11
BBS: BJ1SA-12

Uplinks: 145.8250 MHz FM, PL 67.0 Hz.
145.9250 - 145.9750 MHz SSB/CW
145.8250 MHz AFSK 1200 BPS
Downlinks: 435.6750 MHz FM
435.7650 - 435.7150 MHz SSB/CW
435.6750 MHz AFSK 1200 BPS

Beacon: 435.7900 MHz CW

Mode and Antenna Polarization:
V: LHCP 2.0dBi max
U: RHCP 3.0dBi max

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=108

For more information about XW-1 (CAS-1):
http://
[04302012]
=====
SO-67 SumbandilaSat
Catalog Number: 35870
Launch Date: September 17, 2009 1555z
Launch site: Baikonur, Kazakhstan

Status: Non - Operational

Callsign: ZS0SUM

Uplink: 145.875MHz FM tone 233.6 Hz
Downlink: 435.345MHz FM

Mode and Antenna Polarization:
V: Linear
U: Linear

For more information about SO-67:
http://www.amsatsa.org.za/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=88
[01272012]
=====
CP4
Catalog Number: 31132
Launch Date: April 17, 2007

Status: Non-Operational

Current Mode: /u

TLM Downlink: 437.325 MHz 1200 bps FSK AX.25
CW Beacon: 437.325 MHz CW

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=79
[09062010]
=====
LIBERTAD-1
Catalog Number: 31128
Launch Date: April 17, 2007

Status: Non-Operational

Current Mode: V/u APRS Packet ax25

Callsign: 5K3L

Uplink: 145.825 MHz 1200 AFSK ax25 APRS
Downlink: 437.399 MHz 1200 AFSK ax25 APRS

Telemetry Beacon: 437.4050 MHz 1200 AFSK ax25

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=76
[09062010]
=====
PO-63 PEHUENSAT-1
Catalog Number: 29712
Launch Date: January 10, 2007

Status: Non-Operational

Current Mode: V/v

Uplink/Downlink: 145.825 Mhz FM
Voice Recorder: 145.825 Mhz FM

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=51
[09062010]
=====
NCUBE-2
Catalog number: 28897
Launch Date: October 27, 2005

Status: Still attached to XO-53 (SSETI)?

Proposed Callsign: TBA
Proposed Transmit Frequency: 437.305
2407.250

Official Website: http://www.ncube.no

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=24
[09062010]
=====
XO-53 SSETI
Catalog number: 28894
Launch Date: October 27, 2005

Status: Non-operational

Voice Uplink: 437.250 MHz FM 67Hz CTCSS
Voice Downlink: 2401.835 MHz FM
Packet Up/Downlink: 437.250 MHz 9k6 packet
Packet Downlink 2401.835 MHz 38k4 packet

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=54
[09062010]
=====
UWE-1
Catalog Number: 28892
Launch Date: October 27, 2005

Status: Non-Operational

Mode U Telemetry
Downlink: 437.5050 MHz 9600 AFSK

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=53
[09062010]
=====

AO-51 ECHO
Catalog number: 28375
Launch date: June 29, 2004 0745z
Launch site: Baikonur, Kazakhstan

Status: Non - Operational

Current Mode(s):
Voice repeater: V/u
Uplink: 145.880 MHz FM
Downlink: 435.150 MHz FM

Telemetry: Recovery efforts
Downlink: 435.150MHz 9k6

Analog voice downlink: 435.300 MHz FM
435.150 MHz FM
2401.200 Mhz FM
Analog voice uplink: 145.860 MHZ FM
145.880 MHz USB
145.880 MHz FM
145.920 MHz FM
145.920 MHz FM - 67 Hz PL tone burst
1268.705 MHz FM
Digital Downlinks: 435.150 MHz FM 38k4 PBP, 1 watt output
435.150 MHz FM 9k6 Pacsat Broadcast Protocol
2401.200 MHz FM 38k4 bps, AX.25
Digital Uplink: 145.860 MHz FM 9k6 Pacsat Broadcast Protocol
1268.703 mhz FM 9k6 Pacsat Broadcast Protocol
Beacon: 435.150 MHz

Mode and Antenna Polarization:
T: Linear
V: Linear
U: TX A (usually digital)LHCP
TX B (usually analog) RHCP
L: Linear
S: Linear

Broadcast: PECHO-11
BBS: PECHO-12

Official Webpage: http://www.amsat.org/amsat-new/echo/CTNews.php

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=19
[12062011]
=====
CANX-1
Catalog Number: 27847
Launch Date: June 30, 2003

Status: Non-Operational

Downlink: 437.8800 MHz AFSK 1k2bps
[06052009]
=====
DTUSAT
Catalog Number: 27842
Launch Date: June 30, 2003

Status: Non-Operational

Current Mode: 2k4 AFSK Packet last reported

Downlink: 437.475MHz

Officail webpage: http://dtusat1.dtusat.dtu.dk/

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID=101&retURL
=satellites/all_oscars.php
[02212009]
=====
AO-49 AATiS OSCAR-49 (SAFIR-M)
Catalog number: 27605
Launch Date: December 20, 2002

Status: Non-operational.

Uplink: 435.275 MHz 1200-baud AFSK
Downlink: 145.825 MHz 9600-baud FSK
(optional voice message)

Broadcast callsign: DP0AIS

Official webpage: http://amend.gmxhome.de
[01222007]
=====
MO-46 TIUNGSAT-1
Catalog number: 26548
Launch date: September 26, 2000

Status: Telemetry only

Uplinks: 145.850 MHz
145.925 MHz 9600-baud FSK
Downlink: 437.325 MHz

Broadcast callsign: MYSAT3-11
BBS: MYSAT3-12

TiungSat-1 is Malaysia's first micro-satellite and in addition to
commercial land and weather imaging payloads offers FM and FSK
Amateur Radio communication.

TiungSat-1, named after the mynah bird of Malaysia, was developed as
a collaborative effort between the Malaysian government and Surrey
Satellite Technology Ltd.
[03302009]

=====
NO-45 SAPPHIRE
Catalog number: 26932
Launch Date: September 30, 2001

Status: Non-Operational

Downlink: 437.095 MHz 1200 baud AX-25 AFSK
Uplink: 145.945 MHz UI Digipeater
Digi Callsign: KE6QMD

Everyone is welcome to use the digipeating/APRS features of Sapphire,
as per the user service agreement located at the following URL:
http://web.usna.navy.mil/~bruninga/pcsat/contract.txt
[03132005]
=====
SO-42 SAUDISAT-1B
Catalog number: 26549
Launch date: September 26, 2000

Status: Non-Operational

Downlink: 437.075 MHz

Broadcast Callsign: SASAT2-11
BBS: SASAT2-12

Further information is available at:
http://www.amsat.org/amsat/sats/n7hpr/so42.html
[01222007]
=====
SO-41 SAUDISAT-1A
Catalog number: 26545
Launch Date: September 26, 2000

Status: Non-Operational

Uplink: 145.850 MHz
Downlink: 436.775 MHz

Broadcast Callsign: SASAT1-11
BBS: SASAT1-12

Further information is available at:
http://www.amsat.org/amsat/sats/n7hpr/so41.html
[01222007]
=====
AO-40 AMSAT OSCAR 40
Catalog number: 26609
Launch Date: November 16, 2000

Status: Non-Operational

Uplinks

V-band: 145.840 - 145.990 MHz CW/LSB
U-band: 435.550 - 435.800 MHz CW/LSB
L1-band: 1269.250 - 1269.500 MHz CW/LSB
L2-band: 1268.325 - 1268.575 MHz CW/LSB

Downlinks

S2-band: 2401.225 - 2401.475 MHz CW/USB
K-band: 24048.010 - 24048.060 MHz CW/USB
Beacon: 2401.323 MHz
24048.035 MHz

P3-D Telemetry Beacons (IHU)

BEACON General Beacon(GB) Middle Beacon(MB) Engineering Beacon(EB)
2 m none 145.898 MHz none
70cm 435.438 MHz 435.588 MHz 435.838 MHz
13cm(1) 2400.188 MHz 2400.338 MHz 2400.588 MHz
13cm(2) 2401.173 MHz 2401.323 MHz 2401.573 MHz
3cm 10450.975 MHz 10451.125 MHz 10451.375 MHz
1.5cm 24047.885 MHz 24048.035 MHz 24048.285 MHz
[07162007]
=====
OO-38 OPAL
Catalog Number: 26063
Launch Date: January 27, 2000

Status: Non-Operational

Mode U TLM Beacon
Downlink: 437.1000 MHz 9600 FSK
[08132007]
=====
UO-36 UoSAT-12
Catalog number: 25693
Launch date: April 21, 1999

Status: Unknown

Uplink: 145.960 MHz (9600-baud FSK)
Downlinks: 437.025 MHz
437.400 MHz

Broadcast Callsign: UO121-11
BBS: UO121-12

The VK5HI viewer shareware for UO-36 is available on the AMSAT-NA web
site at the following URL:
ftp://ftp.amsat.org/amsat/software/win32/display/ccddsp97-119.zip
[01222007]
=====
SO-35 SUNSAT

Catalog Number: 25636
Launch date:February 23, 1999

Status: Non-Operational

Downlink: Mode B Repeater: 436.291 MHz
Mode J Digipeater: 436.250 MHz

Uplinks: Mode B Repeater: 145.825 MHz
Mode J Digipeater: 145.825 MHz
145.900 MHz

For more information of SUNSAT vist the satellite web site:
http://esl.ee.sun.ac.za/projects/sunsat/
[01222007]
=====
PO-34 PANSAT
Catalog number: 25520
Launch date: October 30, 1998

Status: Telemetry downloads only

Uplink/downlink: 436.500 MHz

Official Webpage: http://www.sp.nps.navy.mil/pansat/
[05092004]
=====
SO-33 SEDSAT-1
Catalog number: 25509
Launch date: October 24, 1998

Status: Semi-operational

Downlink: 437.910 MHz FM (9600-baud FSK)

The satellite is not currently available for uplink transmissions and
the image and transponder recovery efforts have been unsuccessful.

For more information on SedSat-1 visit the satellite web site:
http://seds.uah.edu/projects/sedsat/sedsat.htm
[09042006]
=====
GO-32 Gurwin TechSat-1B
Catalog number: 25397
Launch Date: July 10, 1998

Status: Non-Operational

Current Modes:
Telemetry : /u

Downlink: 435.225 MHz FM (9600-baud FSK)
435.325 Mhz - Not Available - temperature problems
Uplinks: 145.850 FM
145.890 FM

145.930 FM
1269.700 FM
1269.800 FM
1269.900 FM

Broadcast Callsign: 4XTECH-11
BBS Callsign: 4XTECH-12

More information of GO-32 can be found at:
http://asri.technion.ac.il/techsat/

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID=14&retURL
=/satellites/status.php
[07172010]
=====
TO-31 TMSAT-1
Catalog number: 25396
Launch Date: July 10, 1998

Status: Non-operational

Uplink: 145.925 MHz 9600 baud FSK
Downlink: 436.925 MHz 9600 baud FSK

Broadcast callsign: TMSAT1-11
BBS: TMSAT1-12
[05012006]
=====
MO-30 UNAMSAT-2
Catalog Number: 24305
Launch Date: September 5, 1996

Status: Non-operational

Downlink: 435.1380 MHz AFSK 1200 BPS
Downlink: 435.2060 MHz AFSK 1200 BPS
Uplink: 145.8150 MHz AFSK 1200 BPS
Uplink: 145.8350 MHz AFSK 1200 BPS
Uplink: 145.8550 MHz AFSK 1200 BPS
Uplink: 145.8750 MHz AFSK 1200 BPS
[06042009]
=====
PO-28 POSAT-1
Catalog number: 22829
Launch Date: September 25, 1993

Status: Non-operational

Downlink: 429.950
Uplink: Not until handover back to Amatuer usage

Broadcast callsign: POSAT1-11
BBS callsign: POSAT1-12

AMSAT Webpage: http://www.amsat.org/amsat/sats/n7hpr/po28.html
POSAT-1 webpage:
http://www.ee.surrey.ac.uk/SSC/CSER/UOSAT/missions/posat1.html
[01012009]
=====
IO-26 ITAMSAT
Catalog number: 22826
Launch Date: September 26, 1993

Status: PSK carrier only

Current Mode:

Uplinks: 145.875 MHz FM 1200-baud
145.900 MHz FM 1200-baud
145.925 MHz FM 1200-baud
145.950 MHz FM 1200-baud

Downlink: 435.808 MHz PSK

Broadcast Callsign: ITMSAT-11
BBS: ITMSAT-12

Official webpage: http://www.itamsat.org
AMSAT Webpage: http://www.amsat.org/amsat/sats/n7hpr/io26.html
[01212007]
=====
KO-25 KITSAT
Catalog number: 22828
Launch date: September 26, 1993

Status: Non-operational

Uplink: 145.980 MHz FM 9600-baud FSK
Downlink: 436.500 MHz FM

Broadcast Callsign: HL02-11
BBS: HL02-12
[05092004]
=====
AO-24 ARSENE
Catalog Number: 22654
Launch Date: May 13, 1993

Status: Non-operational

Uplink: 435.0625 MHz FM 1k2bps AFSK
435.1125 MHz FM 1k2bps AFSK
435.1375 MHz FM 1k2bps AFSK
Downlink: 145.9750 MHz FM 1k2bps AFSK
2446.5025 MHz FM 1k2bps AFSK

Beacon: 2446.4700 MHz CW

Broadcast callsign:
BBS:
[12162009]
=====
KO-23 KITSAT
Catalog number: 22077
Launch date: August 10, 1992

Status: Non-operational

Uplink: 145.900 MHz FM (9600-baud FSK)
Downlink: 435.170 MHz FM

Broadcast Callsign: HLO1-11
BBS: HLO1-12
[01222007]
=====
UO-22 UOSAT
Catalog number: 21575
Launch date: July 17, 1991

Status: Non-Operational

Uplink: 145.900 FM 9600-baud FSK
Downlink: 435.120 MHz FM

Broadcast Callsign: UOSAT5-11
BBS: UOSAT5-12
[01222007]
=====
AO-21 AMSAT-OSCAR 21
Catalog Number: 21087
Launch Date: January 29, 1991

Status: Non-Operational

Uplink: 435.041 MHz FM DSP
Downlink: 145.983 MHz FM DSP
[01222007]
=====
FO-20 JAS-1b
Catalog number: 20480
Launch Date: February 07, 1990

Status: Non-Operational

Beacons: 435.795 MHz CW
435.910 MHz AX25

Voice Transponder:
Uplink: 145.900 to 146.000 MHz CW/LSB
Downlink: 435.800 to 435.900 MHz CW/USB

Digital Transponder:
Uplinks: 145.850 MHz

145.870 MHz
145.890 MHz
145.910 MHz
Downlink: 435.910 MHz

More FO-20 info can be found at:
http://www.amsat.org/amsat/sats/n7hpr/fo20.html
[01152007]
=====
WO-18 WEBERSAT
Catalog Number: 20441
Launch Date: January 22, 1990

Status: Non-Operational

Downlink: 437.104 MHz SSB 1200 Baud PSK AX.25
[05012006]
=====
DO-17 Dove
Catalog Number: 20440
Launch Date: January 22, 1990

Status: Non-operational.

Downlink: 145.825 MHz FM 1200 Baud AFSK
Beacon: 2401.220 MHz
[05012006]
=====
AO-16 PACSAT
Catalog number: 20439
Launch Date: January 22, 1990

Status: non-operational

Current Mode: V/u

Uplink: 145.900 MHz FM 1200-baud Manchester FSK (reserved)
145.920 MHz FM VOICE
145.940 MHz FM 1200-baud Manchester FSK (reserved)
145.960 MHz FM 1200-baud Manchester FSK (reserved)

Downlink: 437.026 MHz USB VOICE
(1200-baud PSK - MBL Telemetry Only)

Mode-S Beacon: 2401.1428 MHz [NO FUTURE OPERATIONS PLANNED]

Mode and Antenna Polarization:
U: RC 437.050 MHz RHCP
PSK 437.026 MHz LHCP
V: Linear

Broadcast Callsign: PACSAT-11
BBS: PACSAT-12

AO-16 AMSAT Webpage: http://www.amsat.org/amsat/sats/n7hpr/ao16.html
[07242009]
=====
UO-15 UoSAT-4
Catalog Number: 20438
Launch Date: January 22, 1990

Status: Non-operational

Uplink: ?
Downlink: 435.1250MHz (?)
435.1200MHz (?)
[06042009]
=====
UO-14 UoSAT-3
Catalog number: 20437
Launch date: January 22, 1990

Status: Non-operational

Uplink: 145.975 MHz FM
Downlink: 435.070 MHz FM
[05092004]
=====
FO-12 Fuji-OSCAR 12
Catalog Number: 16909
Launch Date: August 12, 1986

Status: Non-Operational

Mode V/U (J) Linear Transponder (Inverting):
Uplink: 145.9000 - 146.0000 MHz SSB/CW
Downlink 435.8000 - 435.9000 MHz SSB/CW

Mode V/U (J) Packet:
Uplink: 145.8500 MHz MFSK 1200 BPS
Uplink: 145.8700 MHz MFSK 1200 BPS
Uplink: 145.8900 MHz MFSK 1200 BPS
Uplink: 145.9100 MHz MFSK 1200 BPS

Downlink 435.9100 MHz PSK 1200 BPS

Telemetry Beacon: 435.7950 MHz SSB/CW
[01152007]
=====
AO-10 OSCAR 10
Catalog number: 14129
Launch Date: June 16, 1983

Status: Non-operational

Uplink: 435.030 to 435.180 MHz CW/LSB
Downlink: 145.975 to 145.825 MHz CW/USB

Beacon: 145.810 MHz (unmodulated carrier)

W4SM has more information about the satellite at the following URL:
http://www.cstone.net/~w4sm/AO-10.html
[05092004]
=====
AO-8 AMSAT-OSCAR 8
Catalog Number: 10703
Launch Date: March 3, 1978

Status: Non-Operational

Mode V/U (J) Linear Transponder (Non-Inverting): Non-Operational
Uplink: 145.9000 - 146.0000 MHz SSB/CW
Downlink 435.1990 - 435.2000 MHz SSB/CW

Mode V/U (J) TLM Beacon: Non-Operational
Downlink 435.0950 MHz CW

Mode V/A (A) Linear Transponder (Non-Inverting): Non-Operational
Uplink: 145.8500 - 145.9000 MHz SSB/CW
Downlink 29.4000 - 29.5000 MHz SSB/CW

Mode V/A (A) TLM Beacon: Non-Operational
Downlink 29.4020 MHz CW
[01152007]
=====
AO-6 AMSAT-OSCAR 6
Catalog Number: 06236
Launch Date: October 15, 1972

Status: Non-Operational

Uplink: 145.9000 - 146.0000 MHz SSB/CW
Downlink: 29.4500 - 29.5500 MHz SSB/CW
Beacons: 29.450 MHz
435.100 MHz
[01312008]
=====
AO-5 Australis-OSCAR 5
Catalog Number: 04321
Launch Date: January 23, 1970

Status: Non-Operational

Telemetry Beacons: 144.0500 MHz CW
29.4500 MHz CW
[01152007]
=====
OSCAR III
Catalog Number: 01293
Launch Date: March 09, 1965

Status: Non-Operational

Uplink: 145.9750 - 146.0250 MHz SSB/CW
Downlink: 144.3250 - 144.3750 MHz SSB/CW

[01012007]
=====
RS-15 RADIO SPORT RS-15
Catalog number: 23439
Launch Date: December 26, 1994

Status: Non-operational

Uplink: 145.858 to 145.898 MHz CW/USB
Downlink: 29.354 to 29.394 MHz CW/USB

Beacon 1: 29.352 MHz (intermittent)
Beacon 2: 29.398 MHz

SSB meeting frequency: 29.380 MHz (unofficial)
[06202004]
=====
RS-13 RADIO SPORT RS-13
Catalog number: 21089
Launch date: February 5, 1991

Status: Non-operational

Uplink: 21.260 to 21.300 MHz CW/USB
Downlink: 145.860 to 145.900 MHz CW/USB

Beacon: 145.860 MHz

Robot: 145.908 MHz
[05232004]
=====
RS-12 RADIO SPORT RS-12
Catalog number: 21089
Launch date: February 5, 1991

Status: Non-operational

Uplink: 21.210 to 21.250 MHz CW/USB
Downlink: 29.410 to 29.450 MHz CW/USB

Beacon: 29.408 MHz

Robot: 29.454 MHz
[05232004]
NNNN
/EX

SB SAT @ AMSAT W8ISS $WSR-184.S4
WSR 184 Part 4 07/02/2012

AMSAT NEWS SERVICE BULLETIN 184.S4
FROM AMSAT HQ SILVER SPRING, MD, July 02, 2012
TO ALL RADIO AMATEURS
BID: $WSR-184.S4

THE FOLLOWING SATELLITES HAVE RE-ENTERED OR HAVE BEEN RETURNED SAFELY:

ARISSat-1
Catalog number: 37772
Launch date: August 03, 2011 1843z
Launch site: International Space Station

Status: Re-entered January 05, 2012

Callsign: RS01S

Current Mode(s):
Linear Transponder: U/v
Uplink: 435.758 to 435.742 MHz CW/LSB
Downlink: 145.922 to 145.938 MHz CW/USB

FM Telemetry/SSTV/Messages/ID:
Downlink: 145.950 MHz FM

Telemetry/Beacon:
Downlink: 145.939 MHz CW1
145.919 MHz CW2
145.920 MHz 1k BPSK USB
145.920 MHz 400b BPSK USB

Official Webpage:http://www.amsat.org/amsat-new/ARISSat/ARISSat.php

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/informal_detail.php?serialnum=89
[01052012]
=====
CAERUS
Catalog Number:
Launch Date: December 08, 2010 15:43:00 UTC
Launch site: Kennedy Space Center, Titusville, Florida, USA

Status: Re-entered December 22, 2010

Uplink:
Downlink: 437.600 MHz 1k2 AX.25

Beacon: 437.600 MHz CW

Callsign: KJ6FIX

URL:
http://www2.isi.edu/research/prj-serc/prj-serc_projects/prj-serc_projects-8.
htm

IARU coordination status page:

[11102011]
=====
CO-56 CUTE-1.7 + APD
Catalog number: 28941
Launch date: February 21, 2006

Status: Re-entered
Re-entered: October 25, 2009

Uplink: 1268.5000 MHz GMSK 9600 BPS
Downlink: 437.4700 MHz 1200 FM ax25 or SRLL (ACTIVE only near Japan?)

Telemetry Beacon: 437.3850 CW
Callsign: JQ1YPC

Information webpage:
http://lss.mes.titech.ac.jp/ssp/spacerium/cute1blog/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=56
[09062010]
=====
BEVO-1 (DRAGONSAT-1)
Catalog Number: 35690
Launch Date: May 19, 2009

Status: Re-entered
Re-entered:

Downlink: 437.325 MHz 9k6 GMSK
437.325 MHz CW 20wpm

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=117
[07312009]
=====
AggieSat2 (DRAGONSAT-2)
Catalog Number: 35690
Launch Date: May 19, 2009

Status: Re-entered
Re-entered:

Downlink: 436.250 MHz 9k6 FHSS
[11112009]
=====
Pollux
Catalog Number: 35693
Launch Date: July 31, 2009

Status: Re-entered
Re-entered:

Callsign: POLLUX-1

Downlink: 145.825MHz 1k2 AX.25

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=139
[09062010]
=====

Castor (ANDE-2)
Catalog Number: 35694
Launch Date: July 31, 2009

Status: Re-entered
Re-entered:

Callsign: KD4HBO-1

Downlink: 145.825 MHz 1k2 AX.25

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=144
[09062010]
=====
NO-62 FCAL
Catalog Number: 29667
Launch Date: December 21, 2006

Status: Re-Entered
Re-entered: July 28, 2008

Downlink: 437.385 Mhz APRS AX25

Downlink ID: KD4HBO

Website: http://eng.usna.navy.mil/~bruninga/fcal.html

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=59
[01012009]
=====
NO-61 ANDE
Catalog Number: 29664
Launch Date: December 21, 2006

Status: Re-Entered
Re-entered: December 25, 2007

Uplink/Downlink: 145.825 Mhz FM APRS AX25
[01032008]
=====
NO-60 RAFT-1
Catalog Number: 29661
Launch Date: December 21, 2006

Status: Re-Entered
Re-entered: May 30, 2007

Main Downlink: 145.825 Mhz FM APRS AX25
APRS Uplink: 145.825 MHz FM APRS AX25
Voice/PSK31 Uplink: 28.120 MHz

Packet to Voice ID: RAFT
[06112007]

=====
GENESAT-1
Catalog Number: 29655
Launch Date: December 16, 2006

Status: Re-Entered
Re-entered date: August 8, 2010

Current Mode: /u

Callsign: KE7EGC

Telemetry Beacon Downlink: 437.0695 MHz AFSK 1200 BPS

Official webpage: http://www.crestnrp.org/genesat1/ahc.html
[08082010]
=====
HO-59 HITSat
Catalog number: 29484
Launch date: September 22, 2006

Status: Re-Entered
Re-entered: June 18, 2008

Telemetry Downlink: 437.4250 MHz AFSK 1200 BPS
Beacon: 437.2750 MHz CW

Callsign: JR8YJT
[01012009]
=====
SO-43 Starshine 3
Catalog Number: 26929
Launch Date: September 30, 2001

Status: Re-Entered
Re-entered: January 21, 2003

Beacon: 145.825Mhz
[02212009]
NNNN
/EX

ANS is released worldwide via the AMSAT ANS e-mail reflector and a live radiocast on the AMSAT-NA 20-meter net held each Sunday on 14.282 MHz. Pre-net operations start at 18:00 UTC, with current ANS bulletins transmitted to the eastern U.S. at 19:00 UTC and to the western U.S. at 19:30 UTC.

Information on AMSAT-NA is available at the following URL:
http://www.amsat.org

Mailing address:
AMSAT-NA
850 Sligo Avenue, Suite 600

Silver Spring, Maryland 20910-4703

Voice: 301-589-6062
888-322-6728
FAX: 301-608-3410

Currently, AMSAT-NA supports the following (free) mailing lists:

* AMSAT News Service (ANS)
* General satellite discussion (AMSAT-BB)
* Orbit data (KEPS)
* Manned space missions (SAREX)
* District of Columbia area (AMSAT-DC)
* New England area (AMSAT-NE)
* AMSAT Educational Liaison mailing list (AMSAT-EDU)
* AMSAT K-12 Educational Liaison mailing list (AMSAT-K12)

A daily digest version is available for each list.

To subscribe, or for more list information, visit the following URL:
http://www.amsat.org/mailman/listinfo/ans

In addition to regular membership, AMSAT-NA offers membership in the President's Club. Members of the President's Club, as sustaining donors to AMSAT Project Funds, will be eligible to receive additional benefits. Application forms are available from the AMSAT-NA Office.

This week's Weekly Satellite Report Editor is James French, W8ISS.

ANS is always dedicated to past ANS editor 'BJ' Arts, WT0N, and to the memory of longtime AMSAT supporters Werner Haas, DJ5KQ, Dennis Kitchen, G0FCL and John Branegan GM4IHJ.

Please send any amateur satellite news or reports to: ans-editor{at}
amsat.org
NNNN
/EX

100. Radio Meteor Obs. Bull. June 2012 daytime streams

Newsgroup: rec.radio.amateur.space
Date: 2012-07-05 19:04:45 UTC
From: Chris Steyaert <observations@rmob.org>
Message-ID: <29pbv75l0q3td4hinfu6l669pk0iklo56j@4ax.com>
Source record: 150
Cross-posted to: rec.radio.amateur.space,sci.astro.amateur

Radio Meteor Observation Bulletin No. 227 of June 2012 (85K) is available now as

http://www.rmob.org/rmobtext/rmob1206.txt

More information and the visual presentation of the hourly forward scatter
counts can be found on

http://www.rmob.org

Chris

101. maintenance ?

Newsgroup: rec.radio.amateur.space
Date: 2012-07-07 22:07:03 UTC
From: boris@yahoo.com
Message-ID: <89752995@news.synserver.de>
Source record: 201

oops,

it should be helpful to troubleshoot the data analysis of the weather in a
smart way
:-)

102. ANS-190 AMSAT News Service Weekly Bulletins

Newsgroup: rec.radio.amateur.space
Date: 2012-07-08 14:43:52 UTC
From: JoAnne Maenpaa <k9jkm@comcast.net>
Message-ID: <000901cd5d18$0e8aad20$2ba00760$@net>
Source record: 202
Cross-posted to: rec.radio.amateur.space,rec.radio.info

AMSAT NEWS SERVICE
ANS-190

ANS is a free, weekly, news and information service of AMSAT North America,
The
Radio Amateur Satellite Corporation. ANS reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in
designing, building, launching and communicating through analog and digital
Amateur Radio satellites.

Please send any amateur satellite news or reports to:
ans-editor@amsat.org

In this edition:
* New AO7 Distance Record Set Twice This Week
* Italian HF Special Event Commemorates Apollo Space Program
* Listen for ARRL TI-2: Space in the Classroom Satellite Contacts
* University of Florida SwampSat CubeSat Plans for December 2012 Launch
* Satellite Presentation at University of Missouri on July 20
* Near Space Balloon Flight Ham AK4JG Named Newsline Young Ham of the Year
* ARISS Status - 2 July 2012

SB SAT @ AMSAT $ANS-190.01
ANS-190 AMSAT News Service Weekly Bulletins

AMSAT News Service Bulletin 190.01
From AMSAT HQ SILVER SPRING, MD.
July 8, 2012
To All RADIO AMATEURS
BID: $ANS-190.01

New AO7 Distance Record Set Twice This Week

On July 2 at 0955Z Bill Dzurilla, NZ5N operating from Slovakia as OM3BD (grid JN88) reported a successful contact via AO-7 Mode B with Wyatt Dirks, AC0RA (grid EN31). The GPS-measured distance between grids JN88 and EN31 is 7849 km. Bill wrote, "Wyatt did all the hard work by waking up at 0300 his time, driving to a hill an hour away from his home, setting up his station, and working me before sunrise. It appears that an even longer distance is attainable, and Wyatt is looking for a suitable place from which we can try be-

fore I leave Slovakia in mid-July."

Prior distance records set via AO-7 included:
+ PY5LF and ZS6BB 7630 km
+ PS8RF and ZS2BK 7694 km
+ K3SZH and PY2OV 7738 km
+ ZS6BB and EA6SA 7766 km
+ PY5LF and K3SZH 7843 km
+ OM3BD and AC0RA 7849 km (July 2 record with AC0RA in grid EN31)
+ OM3BD and AC0RA 7903 km (July 4 record with AC0RA in grid EN41)

On July 4, Wyatt, AC0RA woke up early and this time drove 150 miles to EN41 and set up his portable station. A contact, lasting 30 seconds, with OM3BD extended the distance record to 7903.55 km.

The theoretical maximum range of AO-7 is estimated at 7907 km.

Recordings, pictures, and further info at
http://qsl.net/nz5n/AO7record.htm.

[ANS thanks and congratulates Bill Dzurilla, OM3BD/NZ5N and
Wyatt Dirks, AC0RA for the above information]

Italian HF Special Event Commemorates Apollo Space Program

ARI, the Associazione Radioamatori Italiani, and their club station IQ1TW announced a special operating award "Apollo Space Program ->From the Earth to the Moon" for contacts between July 1 - July 31, 2012. This is to commemorate and keep alive the memory of the space program which has revolutionized the life of mankind.

To qualify for the award you need to have confirmed contacts with the ARI Headquarters Station IQ1TW and any three stations from this list: IZ1UMD, IZ1RFU, IZ1XBB, IZ1WVX, IZ1LBH, IK1WGZ, IZ1RGY, IZ2SMV, I1MXI.

On July 20, the anniversary of the first moon landing, a confirmed contact with IQ1TW (without the necessity of the other 3 contacts) will qualify you for the award.

The special event stations will operate with 200 watts using dipole and vertical antennas.

Full details, including a list of the planned HF operating frequencies and modes, log and confirmation information, rules, and application instructions are posted on the ARI web pages:
http://aritortona.xoom.it/

[ANS thanks Associazione Radioamatori Italiani and the DXNL Bulletin #1786 -Jun 27, 2012 - for the above information]

Listen for ARRL TI-2: Space in the Classroom Satellite Contacts

The ARRL Teachers Institute - Space in the Classroom is this coming week - July 9-12. The Institute will meet in Dayton, Ohio and is sponsored by the Dayton Amateur Radio Association. Additional support from ARRL ETP donors and Yaesu make this program possible.

The TI-2 Space curriculum focuses on the nuts and bolts of setting up and operating a satellite ground station. This serves as excellent preparation for a scheduled contact with the ISS through the Amateur Radio on the International Space Station (ARISS) program. But it also provides instruction for continued use of satellites and other man made space assets to explore naturally generated signals, space and a variety of topics.

The course is 4 days: the first half will be setting up and learning to operate the ground station, the second half will be practice making satellite contacts and instruction in using space borne assets in the classroom. Participants will receive all the equipment necessary to set up a basic satellite ground station.

Matt Severin, N8MS will be instructing the Teachers' Institute. He will have 8 teachers learning how to set up and operate ground stations. They plan to operate from about 1200 to 2000 UTC each day, give or take a few hours. Our primary amateur radio satellites will be AO27, SO50, FO29, and VO52. They will try to capture data and telemetry from the many cubesats currently operating. Amateur satellite operators are invited to take a moment to say hello and work a few of the teachers in Matt's group.

Full details of the ARRL TI-2: Space in the Classroom program can be found on-line: http://www.arrl.org/ti-2-space-in-the-classroom

[ANS thanks the ARRL and Matt Severin, N8MS for the above information]

University of Florida SwampSat CubeSat Plans for December 2012 Launch

A cubesat called SwampSat, built by students at the University of Florida, was recently unveiled. They also demonstrated the operational satellite to Florida's Lieutenant Governor.

SwapSat is planning on a ride to orbit on the SpaceX Falcon 9 rocket into a 450 km orbit with an inclination of 45 degrees in the December 2012 timeframe.

The SwampSat downlink will transmit 1 watt of RF on 437.385 MHz, 1200 bps AX25 packet radio. The University of Florida video of SwampSat can be viewed at:
http://www.youtube.com/watch?v=5ij3Vyjwg&feature=player_embedded

For more information see also:
http://www.amsat-uk.org/?p=17
http://www.amsat-uk.org/?p=64

UF shows off its small satellite:
http://www.gainesville.com/article/20120406/articles/120409715

Gator Amateur Radio Club http://www.gatorradio.org/
University of Florida Small Satellite Design Club (SSDC)
http://www.ufsmallsat.com/

[ANS thanks the University of Florida and AMSAT-UK for the above information]

Satellite Presentation at University of Missouri on July 20

Attention amateur radio operators near Kansas City, Missouri!

On July 20, the Hams in Space Team will be giving their Satellite Presentation at the University of Missouri, Kansas City's Communiversity. Communiversity is the University's Community Education Program available to anyone from the community who wishes to attend.

Randy Schulze, KD HKD wrote, "We're preparing this presentation to be enjoyed not only by Licensed Hams but also to members of the general community as a means of putting Amateur Radio's best foot forward, through information about at least one of the fun and amazing things that can be done with Ham Radio! If you plan to attend this presentation, please register early. If the anticipated attendance exceeds the capacity of the presently scheduled class room, the University may be able to make arrangements to move the presentation to a larger class room."

The University of Missouri Kansas City Communiversity Web Site is:
http://www.umkc.edu/commu. You will find all of the registration information there.

Randy concluded, "So spread the word to your friends; Hams and Non-Hams alike! Register to attend the Hams In Space Presentation at the University of Missouri, Kansas City, Communiversity, and help put Amateur Radio's Best Foot Forward while at the same time supporting an Outstanding Community Service!"

The class schedule is:
7:00 PM, Friday, July 20, 2012
Communiversity; University of Missouri, Kansas City
Flarsheim Hall, Room 260,
5110 Rockhill Road
Kansas City, Missouri
http://www.umkc.edu/commu/

The Hams in Space web page can be found at:
http://hamsinspace.com

[ANS thanks Randy Schulze, KD HKD for the above information]

Near Space Balloon Flight Ham AK4JG Named Newsline Young Ham of the Year

ERIN KING, AK4JG, NAMED 2012 AMATEUR RADIO NEWSLINE®
"YOUNG HAM OF THE YEAR"

(Santa Clarita, California) - Erin King, AK4JG, a 17-year-old from Columbus, Georgia, who re-founded her high school's radio club and then lofted a ham radio-carrying balloon to over 90,000 feet, recovered the flight data and used it to produce a truly striking video of that flight, has been named as recipient of the 2012 Amateur Radio Newsline Young Ham of the Year Award.

Erin is the daughter of Paul, K4ETY, and Patricia King. She has two siblings: Brandon, age 16 and Rachel, age 15. Erin became a licensed radio amateur in 2009 and now holds an Extra Class license. She is a member of the ARRL, the Columbus Amateur Radio Club, and the Russell County Radio Club. She enjoys operating on local VHF and UHF repeaters as well as phone and digital modes on the High Frequency amateur radio bands. She is looking forward to mastering Morse Code as her next amateur radio challenge.

Erin became interested in amateur radio after joining a club at her high school dealing with robotics and then ham radio-equipped high-altitude balloon launches. This school group has participated in FIRST Robotics competitions, and Erin has twice been Team Lead for Programming. The club also launches several high-altitude balloon missions each year, in a program called DREAMS. They have flown various scientific experiments as part of these missions, in addition to planning, building, and integrating radios, Global Positioning System (GPS) units and TNCs to track and recover the balloons. To facilitate these activities, the group's sponsor, Luther Richardson, KI4AOJ, has encouraged the students to obtain their amateur radio licenses.

A subset of this group, including Erin, has participated in the Massachusetts Institute of Technology's (MIT's) "InvenTeam" competition, designing and building a portable lightning detector and early warning system. In addition, Erin re-started the Columbus High School Radio Club and served as its president for the past two years. The club was active in the 1950s and '60s, and Erin's great-grandfather (the original K4ETY) was one of its mentors at that time. The new club obtained the callsign W4CHS (Columbus High School) and has been active on the air.

Erin's involvement with amateur radio and FIRST Robotics has helped fuel her interest in science and engineering. Last year, she applied for early admission to both Georgia Tech and MIT; she was accepted to both and will be attending MIT this fall.

Inside the shiny tube which contained Erin's MIT acceptance letter was a note suggesting that the students "hack" their tubes, meaning to do something cool with them, in a long-standing tradition of MIT hacks or stunts. Erin chose to send her tube to near-space.

Drawing on her ballooning experience, Erin planned, built, integrated, and tested a complete new tracking setup to fit into the very small shipping tube. The payload consisted of two GPS units, two custom-made antennas, one Argent Data OpenTracker+ kit (which Erin built), one handheld radio, and a fellow ham's Byonics Pocket Tracker, a self-contained 100-milliwatt tracker/radio combination in an Altoids® tin. Erin also talked her mother into letting her use mom's brand new GoPro Hero HD video camera.

With the assistance of a group of hams from the Columbus Amateur Radio club, Erin launched her balloon from Lumpkin, GA. A couple of hours later, she and the tracking team successfully recovered it, along with the complete HD video record of the flight. Erin took this video, as well as other photos and videos taken of the launch activities, and compiled it into an 8-minute presentation, complete with background music. She posted it to YouTube, and put a link to it on the MIT hack-the-tube site. According to YouTube statistics, Erin's video has been viewed thus far in excess of 82,500 times. (see <http://tinyurl.com/ak4jg-space-video>).

This past May, Erin was invited to participate in no less than three forums and sessions at the 2012 Dayton Hamvention. These included the 25th anniversary "Youth Forum," the "Ham Radio Town Meeting" and an "ARRL Expo" presentation where her video was screened.

AWARD CEREMONY

The 2012 Amateur Radio Newsline® "Young Ham of the Year Award" will be presented on Saturday, August 18th at the Huntsville Hamfest in Huntsville, Alabama. As the 2012 "Young Ham of the Year," Erin will receive -- courtesy of Yaesu USA -- an expense-paid trip to the Huntsville Hamfest, along with a gift of Yaesu brand ham radio equipment. CQ magazine will treat her to an expense-paid week at Spacecamp Huntsville, and will present Erin with a variety of CQ products. Amateur Radio Newsline® will provide Erin with a commemorative plaque at the award ceremony. Once again, the cost of year's plaque has been underwritten by Dave Bell (W6AQ), President of DBA Entertainment Inc., Hollywood, California. Heil Sound Ltd. will also be presenting Erin with a ham radio-related gift.

[ANS thanks Amateur Radio Newsline for the above information]

ARISS Status - 2 July 2012

1. Virginia Contact to be Rescheduled

The ARISS contact that was scheduled with the Virginia Air and Space Center in Hampton, Virginia on Tuesday, June 26 was not successful due to ground station issues. ARISS will try to reschedule this event for the week of July 23.

2. ARISS Contact Featured at STEM Conference

On Thursday, June 28, an Amateur Radio on the International Space Station (ARISS) contact was held between Expedition 30/31 crewmember Andr&#65533; Kuipers and students attending the STEM Solutions Youth Summit which was part of the U.S. News STEM Solutions 2012 conference in Dallas, Texas. Telebridge station K6DUE in Maryland provided the radio hookup. The contact, a highlight of the event, provided youth the opportunity to ask Kuipers about life and work in space. Leland Melvin, Associate Administrator for Education, and Charlie Bolden, NASA Administrator, attended the conference.

[ANS thanks Carol, KB3LKI, for the above information]

/EX

In addition to regular membership, AMSAT offers membership in the President's Club. Members of the President's Club, as sustaining donors to AMSAT Project Funds, will be eligible to receive additional benefits. Application forms are available from the AMSAT Office.

Primary and secondary school students are eligible for membership at one-half the standard yearly rate. Post-secondary school students enrolled in at least half time status shall be eligible for the student rate for a maximum of 6 post-secondary years in this status. Contact Martha at the AMSAT Office for additional student membership information.

73,
This week's ANS Editor,
Lee McLamb, KU4OS

103. Weekly Highlights of Solar and Geomagnetic Activity, 02 - 08 July 2012

Newsgroup: rec.radio.amateur.space
Date: 2012-07-09 15:30:11 UTC
From: SWPC.Webmaster@noaa.gov
Message-ID: <20120709153002.44E4F33C4E@panix2.panix.com>
Source record: 203
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.dx,rec.radio.amateur.space,rec.radio.shortwave,rec.radio.info

```
:Product: Weekly Highlights and Forecasts
:Issued: 2012 Jul 09 1449 UTC
# Prepared by the US Dept. of Commerce, NOAA, Space Weather Prediction Center
# Product description and SWPC contact on the Web
# http://www.swpc.noaa.gov/weekly.html
#
# Weekly Highlights and Forecasts
#
Highlights of Solar and Geomagnetic Activity
02 - 08 July 2012

Solar activity ranged from low to high during the period. There were
five major solar events, beginning on the 2nd of July. Region 1515
(S18, L=206, class/area=Fhc/900) was responsible for all of them.
After a lackluster performance in the week prior (5 C-class x-ray
events), it began this week with three M-class x-ray flares. The
largest flare, an M5/2b at 2/1052UTC, brought activity to high
levels for the first time since May 17th. The flare was accompanied
by a Type II radio sweep (1063 km/s) and a 380 sfu Tenflare. A CME
was subsequently observed in LASCO C3 coronagraph imagery at
approximately 2/1254UTC, with most of the ejecta directed south of
the ecliptic plane. The CME was also visible in STEREO-A and B COR2
coronagraph imagery.

Activity dipped to low levels on the 3rd when no M flares were
observed. However, Region 1515 developed a beta-gamma-delta magnetic
configuration that day. Activity returned to high levels the
following day when Region 1515 unleashed an M5/2b flare at
4/0955UTC. Later in the day (04/2209UTC), it produced an M4 x-ray
event accompanied by a 12,000 sfu 245 MHz burst, a Type II sweep (no
speed estimate available), and a 220 sfu Tenflare. Of the seven
M-class events that day, Region 1515 was responsible for six of
them. The remaining M-flare, an M1/2n at 04/1639UTC, was produced by
Region 1513 (N16, L=218, class/area=Dso/240). This event was
accompanied by a 200 sfu Tenflare, and Type II radio (807 km/s) and
Type IV radio emissions. A CME was captured by STEREO-B COR2 imagery
at 04/1754UTC and STEREO-A COR2 coronagraph imagery at 04/1854UTC,
and appeared to have an earth-directed component, consistent with
Region 1513s geoeffective position.

High activity levels continued through the 5th and 6th of July as
Region 1515 grew to its peak, covering 900 millionths of the solar
disk and containing 60 spots. July 5th saw Region 1515 produce an
M6.1/1b flare at 05/1144UTC accompanied by a 290 sfu Tenflare. The
```

following day, this region produced the largest flare of the week, an X1 x-ray event at 06/2308UTC. Although no optical flare was reported, the event was accompanied by a 520 sfu Tenflare, a Type II sweep (1771 km/s), and a Type IV sweep. A CME was subsequently observed in LASCO C3 coronagraph imagery at 06/2324UTC.

Activity dropped to moderate levels on the 7th as Region 1515s magnetic complexity, area and spot count decreased to beta-gamma, 780 millionths, and 43 spots respectively. A new region, Region 1520 (S15, L=86, class/area=Fhc/1070), was numbered as it rotated on to the east limb. It produced an M1 x-ray flare at 7/0728UTC.

High activity levels returned on the 8th, when Region 1515 produced an M6/1n at 08/1632UTC. The event was accompaned by a 640 sfu Tenflare, Type II (2271 km/s) and Type IV radio sweeps. LASCO C2 coronagraph imagery first indicated a CME at 08/1648UTC, with most of the ejecta directed southwest.

Two proton events were observed at geosynchronous orbit during the week. A 10 MeV greater than 10 pfu event began at 07/0400UTC, peaked at 07/0745UTC (25 pfu), and ended at 07/2110UTC. This event was associated with the X1 x-ray flare observed at 06/2308UTC described above. Both 10 and 100 MeV protons were elevated again on the 8th of July following the M6/1n flare described above. Neither the 10 nor the 100 MeV protons had crossed their flux thresholds (10 pfu and 1 pfu) by the end of this report, ending the period at 6 pfu and 4 pfu, respectively.

The greater than 2 MeV electron flux at geosynchronous orbit were at high levels from July 2nd through the 6th, and at moderate levels on the 7th and 8th.

Geomagnetic field activity began the week at active levels for the first three synoptic periods (02/00-02/09UTC), then decreased to quiet to unsettled levels until the 5th, when one active period (05/12-05/15UTC) was observed. The unsettled to active periods were attributed to the presence of a coronal hole high speed solar wind stream. Solar wind speed at the ACE spacecraft was between 650-700km/s on the 2nd, decreasing to around 500 km/s on the 5th, with the Bz-component of the interplanetary magnetic field between 0 and -5 nT for much of the period. Activity for the remainder of the week was at quiet to unsettled levels with the exception of the 21-24UTC period on the 6th associated with a prologned period of negative Bz, and the 21-24UTC period on the 8th. Analysis of data from the ACE spacecraft suggest the activity on the 8th was associated with the arrival of the CME associated with the M1/2n flare on July 4th described above. Wind speed at ACE jumped from 400 to 472 km/s around 08/1500UTC and the Bz component of the solar wind began a smooth rotation from +10 to -9 nT over the course of the next nine hours.

Forecast of Solar and Geomagnetic Activity
09 July - 04 August 2012

Solar activity is expected to be at moderate levels with a chance for high activity until Region 1520 reaches the west limb on 19 July. Low levels of activity are expected from 20-23 July, until old Regions 1515 and 1513 return on 23 and 24 July respectively. Moderate levels of activity, with a chance for high levels, are then expected through the end of the period.

There is a chance for proton events as Region 1520 moves into a favorable position beginning on the 13th of July though the 19th.

The greater than 2 MeV electron flux at geosynchronous orbit is expected to be at high levels from 28 July through 01 August associated with coronal hole high speed stream effects.

Geomagnetic field activity is expected to begin at unsettled to active levels with CME passage, decreasing to mostly quiet levels from 10 July through 26 July. Activity is expected to increase to unsettled to active levels from 27 July through 2 July with the arrival of a coronal hole high speed stream. Activity is expected to then decrease to mostly quiet to unsettled levels through the end of the period.

104. ANS-197 AMSAT News Service Weekly Bulletins

Newsgroup: rec.radio.amateur.space
Date: 2012-07-15 02:57:22 UTC
From: JoAnne Maenpaa <k9jkm@comcast.net>
Message-ID: <001f01cd6235$85fd4850$91f7d8f0$@net>
Source record: 204
Cross-posted to: rec.radio.amateur.space,rec.radio.info

AMSAT NEWS SERVICE
ANS-197

ANS is a free, weekly, news and information service of AMSAT North America, The Radio Amateur Satellite Corporation. ANS reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in designing, building, launching and communicating through analog and digital Amateur Radio satellites.

Please send any amateur satellite news or reports to:
ans-editor@amsat.org

In this edition:

* 2012 AMSAT Space Symposium & Annual General Meeting Comes to Orlando
* AMSAT-UK Monitoring UK Space Agency Reform of the Outer Space Act
* Successful ARISS School Contacts Reported
* Cuba to Alaska Contact Successful via FO-29
* Official Opening of the RSGB National Radio Centre
* NASA TV to Cover Three Hams Docking at ISS
* Five CubeSats Ready for July 21 JAXA HTV-3 Launch
* HORYU-2 Telemetry Resumes Operation
* 50th Anniversary of Telstar-1
* Satellite Shorts From All Over

SB SAT @ AMSAT $ANS-197.01
ANS-197 AMSAT News Service Weekly Bulletins

AMSAT News Service Bulletin 197.01
>From AMSAT HQ SILVER SPRING, MD.
July 15, 2012
To All RADIO AMATEURS
BID: $ANS-197.01

2012 AMSAT Space Symposium & Annual General Meeting Comes to Orlando

AMSAT announces the 2012 AMSAT Space Symposium will be held on Friday, October 26th through Sunday, October 28th. The Symposium weekend will feature:

+ Space Symposium with Amateur Satellite Presentations

+ Operating Techniques, News, & Plans from the Amateur Satellite World

+ Board of Directors Meeting open to AMSAT members

+ Meet Board Members and Officers

+ Annual General Membership Meeting

+ Annual Banquet-Keynote Speaker and Door Prizes

CALL FOR PAPERS

This is the second call for papers for the 2012 AMSAT Annual Meeting and Space Symposium to be held in Orlando, Florida on the weekend of October 26-28, 2012 at the Holiday Inn, Orlando Airport Hotel.

Proposals for papers, symposium presentations and poster presentations are invited on any topic of interest to the amateur satellite community:

+ Papers for publication in the Proceedings

+ Symposium Presentations

+ Poster Presentations

+ Equipment and Operating Demonstrations

We request a tentative title of your presentation as soon as possible, with final copy to be submitted by October 1 for inclusion in the printed proceedings.

Abstracts and papers should be sent to Dan Schultz, N8FGV, at n8fgv at amsat.org.

SYMPOSIUM SCHEDULE

To help you plan your trip to Orlando the 2012 Symposium Committee has posted a high-level schedule of the weekend's events.

Preliminary 2012 Symposium Schedule

Thursday 25 October 2012

AMSAT Board of Directors Meeting 8am - 9pm

Friday 26 October 2012

AMSAT Board of Directors Meeting 8am - Noon
Trips to SkyCraft 9am - Noon
AMSAT Symposium 1pm - 5pm

Saturday 27 October 2012

Symposium 8am - 3pm
AMSAT General Meeting 3:30pm
AMSAT Banquet 6:30pm - 10pm

Sunday 28 October 2012

7:30am AMSAT Area Coordinator's Breakfast
Local trip of Interest TBD

Monday 29 October 2012

Special trip to Kennedy Space Center 8am-6pm
The trip will include a round trip bus from the hotel and entrance to the Space Center. The cost will be about $100. This is a wonderful experience for those that haven't been and for those that have been multiple times. We need to get an idea of how many will participate to select the correct bus. Contact Martha if interested

Watch the AMSAT Symposium Web Pages for the latest information:
http://www.amsat.org/amsat-new/symposium/2012/index.php

[ANS thanks the 2012 Symposium Committee and 2012 Syposium Proceedings Editor Dan Schultz, N8FGV for the above information]

AMSAT-UK Monitoring UK Space Agency Reform of the Outer Space Act

A posting on the UK Space Agency Web Site, announced, "Reform of the Outer Space Act 1986: Consultation". Graham Shirville, G3VZV commented, "Whilst they only relate to UK legislation, both the Consultation Document and the Impact Assessment Document cover a lot of interesting ground, technical, legal and statistical. Well worth a review in my opinion. These proposals make the Space Act more 'cubesat friendly'"

Both of these documents can be accessed on the UK Space Agency web:
http://tinyurl.com/UK-Space-Act (www.bis.gov.uk)

The AMSAT-UK web summarizes the scope of the new Consultation:

This is in response to the Government Growth Review published in March 2011, in which the Government set out its wish to reform the Outer Space Act 1986 by introducing an upper limit on liability for UK operators.

The Outer Space Act covers all UK satellites irrespective of size, from tiny low cost educational CubeSats up to large commercial £500 million satellites.

The key aspects of the consultation are the proposals to waive the capped liability and insurance requirement for in-orbit operation of any satellite that meets the criteria of a CubeSat and to remove the requirement for unlimited indemnity from satellite operators.

The existing Outer Space Act imposes heavy additional costs (>£50,000 per annum) on those wishing to launch small educational CubeSats. The additional costs act as a major deterrent and to-date no such UK CubeSat has been launched.

Graham concludes, "Rest assured that AMSAT-UK will be responding!" More news will be posted as available. The UK Space Agency says that responses are due by August 31, 2012.

[ANS thanks Graham Shirville, G3VZV and AMSAT-UK for the above information]

Successful ARISS School Contacts Reported

Nunavik Youth Connect With ISS

On July 4, youth attending the Cirqiniq Summer Camp in Kuujjuaq, Quebec (Nunavik), Canada spoke with on-orbit astronaut Joe Acaba, KE5DAR via an ARISS contact. Telebridge station K6DUE in Greenbelt, Maryland provided the radio connection.

The contact was held in conjunction with a circus camp being offered to youth, ages 13 to 17, in Nunavik that was led by a group of instructors affiliated with Cirque du Soleil®. The campers learned tight-wire walking, aerial acrobatics and juggling among other skills and ended the session with a parade and community show. This year's theme was "Planets and the Universe." Local media covered the event.

STEM High School Aerospace Scholars, Houston, TX Connect With ISS

An ARISS school contact with participants at Women in STEM High School Aerospace Scholars, Houston, TX was successfully completed on July 10. The contact was a telebridge between NA1SS and W6SRJ.

The group of high school juniors were participating in a summer program called WISH, an acronym for Women in STEM High School Aerospace Scholars. The students were selected from responses to a national invitation to attend multiple robust lessons for six days at Johnson Space Center in Houston. The young women attended briefings, and engaged in competitive hands-on engineering activities related to space exploration and research.

The ARISS contact was incorporated into the learning activities early in the week while learning about space communication and wireless technology.

A video of the contact has been posted on-line:
http://www.youtube.com/watch?v®M-2qegJWo&feature®ayer_embedded

The NASA Press release about the Women in STEM High School Aerospace Scholars program can be viewed on-line at:
http://www.nasa.gov/home/hqnews/2012/jun/HQ_12-209_WISH.html

[ANS thanks the ARISS Status Report and NASA for the above information]

Cuba to Alaska Contact Successful via FO-29

Hector Martinez, CO6CBF in Cuba reported a successful satellite contact Dale Pelzer, KL7R in Alaska via the FO-29 satellite. Cuban amateurs cannot operate on AO-7 mode B so FO-29 is their only opportunity for long range contacts.

Hector says the first 10 attempts via SSB were unsuccessful. Dale drove around 4 miles from his home to a nearby hill, many times very late at night. On Sunday, July 8 at 1920 UTC the two stations finally connected via CW.

Dale's equipment includes a Yaesu FT-817 (only 5W semi-duplex) and ARROW antenna with preamplifier. Hector's equipment is mostly a homebrew setup, 10 elements yagi on 2m and 18 elements yagi for 70cm with a homebrew preamplifier.

Hector will continue to look for new grids and long-range contacts via satellite. He invites interested stations to contact him via e-mail: co6cbf@frcuba.co.cu

[ANS thanks and congratulates Hector Martinez CO6CBF and Dale Pelzer KL7R for the above information]

Official Opening of the RSGB National Radio Centre

Wednesday, July 11, saw the official opening of the RSGB's National Radio Centre (NRC) at Bletchley Park in Milton Keynes.

The opening and unveiling of the plaque was undertaken by Mr. Ed Vaizey, MP. Mr Vaizey is the Minister for Culture, Communications and the Creative Industries and, as such, has overall responsibility for OFCOM. He stated that he fully supported the aim of the Centre in being able to enthuse and inspire children to become the engineers of the future.

Attendees included many of the sponsors together with Iain Standen, the Chief Executive of the Bletchley Park Trust plus, from overseas, Dave Sumner K1ZZ, CEO of the ARRL and Ole Garpestad, LA2RR IARU Vice-President.

AMSAT-UK have supported the creation of this valuable educational outreach resource at Bletchley Park and have arranged for the provision and installation of a set of fully steerable VHF and UHF satellite antenna arrays. It is hoped that it may be possible to use the NRC as the FUNcube-1 Mission Control Centre during the Launch and Early Operations Phase (LEOP) of the mission later this year.

National Radio Centre http://www.nationalradiocentre.com/

Pictures of opening http://www.uk.amsat.org/8841

[ANS thanks Trevor, M5AKA; RSGB, and AMSAT-UK for the above information]

NASA TV to Cover Three Hams Docking at ISS

NASA Flight Engineer Sunita Williams, KD5PLB, along with Russian cosmonaut Yuri Malenchenko, RK3DUP, and Japan Aerospace Exploration Agency astronaut Akihiko Hoshide, KE5DNI were launched aboard a Soyuz TMA-05M spacecraft from the Baikonur Cosmodrome in Kazakhstan at 0240 UTC, July 15.

The three ham crew will arrive at the ISS on July 16, joining NASA Flight Engineer Joe Acaba, KE5DAR, and two Russian cosmonauts: Expedition 32 Commander Gennady Padalka, RN3DT, and Flight Engineer Sergei Revin, RN3BS.

NASA TV's scheduled coverage of the docking is as follows:

Monday, July 16

11:15 PM CDT (0415 UTC, July 17) -- Expedition 32/33 Soyuz TMA-05M docking coverage begins (docking at 11:38 PM [0438 UTC, July 17]), followed by post-docking news conference from Mission Control in Korolev, Russia.

Tuesday, July 17

2:00 AM CDT (0700 UTC) -- Expedition 32/33 Soyuz TMA-05M hatch opening and welcoming ceremony coverage begins (ceremony scheduled for 2:25 AM [0725 UTC]).

NASA TV can be viewed on-line at: http://www.nasa.gov/ntv

[ANS thanks NASA for the above information]

Five CubeSats Ready for July 21 JAXA HTV-3 Launch

Five cubesats are scheduled to be launched on July 21 aboard the JAXA HTV-3 supply mission to the ISS. The satellites have been integrated with the J-SSOD small satellite deployer. The J-SSOD deployer will be integrated to the Japanese Experiment Module, also known as Kibo. They will be deployed with the Kibo robotic arm planned for the September, 2012 timeframe.

The five CubeSats on this mission include:

+ Raiko
http://www.astro.mech.tohoku.ac.jp/RAIKO/ (Japanese)
2U cubesat, photography, Ku-band beacon

+ We Wish
http://www.meisei.co.jp/news/2011/0617_622.html

Infrared camera for environmental studies

+ FITSat 1
http://www.fit.ac.jp/~tanaka/fitsat.shtml
High-speed data test, high power LED visual tracking
CW Beacon 437.250 MHz,
FM Data 437.445 MHz,
High speed data 5840.00 MHz.

+ F-1 Vietnam Student CubeSat
On-board camera for earth observation mission
VX-3R1, 437.485 MHz FM downlink:
o Solar cell power only, operates in sunlight only
o Output power: max 0.3W, half-wave dipole antenna
o Morse code beacon (10 chars) using PWM CW every 30 seconds

VX-3R2, 145.980 MHz FM downlink:
o Rechargeable battery, operates in dark and sunlight
o Output power: max 1.0W, half-wave dipole antenna
o AFSK 1200bps, half duplex, one AX.25 packet every 30 seconds

+ TechEdSat
http://ncasst.org/techedsat.html
http://www.uk.amsat.org/5018
Downlink on 437.465 MHz

[ANS thanks the CubeSat teams, AMSAT-UK, and Mineo Wakita JE9PEL for
the above information]

HORYU-2 Telemetry Resumes Operation

On Tuesday, July 3, the amateur radio satellite HORYU-2 (call sign
JG6YBW) recovered from a problem with stuck telemetry on its 437.375
MHz telemetry downlink. The HORYU-2 Blog indicates the team are now
attempting to take pictures using the on-board camera. Read the KIT
HORYU Blog in Google English: http://tinyurl.com/HORYU-Blog

The free KIT HORYU-2 telemetry software can be downloaded from
http://kitsat.ele.kyutech.ac.jp/Documents/information_launch_english.html

A HORYU-2 online WebSDR receiver can be found at:
http://sdr.opt.ro:8901/

HORYU-2 CW Telemetry Decoder by DK3WN:
http://tinyurl.com/SatSoftwareDK3WN/

HORYU-2, built by students from the Kyushu Institute of Technology,
was launched by JAXA from Tanegashima Space Center on May 18 with
the Observation Mission "SHIZUKU" (GCOM-W1). The SHIZUKU observation

images acquired by AMSR2 have been released. See:
http://www.jaxa.jp/press/2012/07/20120704_shizuku_e.html

[ANS thanks the HORYU-2 Team for the above information]

50th Anniversary of Telstar-1

Recently amateur radio satellite operators have commemorated the 50th anniversary of the launch of the first two amateur radio satellites: OSCAR-1 on December 12, 1961 and OSCAR-2 on June 2, 1962. Amateur radio was in space just four years after Sputnik-1, the first satellite was put in orbit.

This past week, fifty years ago, on July 10, 1962 the first commercial communications satellite, Telstar-1, was launched. Two days into its mission, it relayed the world's first transatlantic television signal, from Andover Earth Station, Maine, to the Pleumeur-Bodou Telecom Center, Brittany, France.

The satellite was spin-stabilized to maintain its desired orientation in space. Power to its onboard equipment was provided by a solar array, in conjunction with a battery back-up system. During the course of its operational lifespan, Telstar 1 facilitated over 400 telephone, telegraph, facsimile and television transmissions. It operated until November 1962, when its on-board electronics failed due to the effects of radiation.

SpaceMart.com has published an article of Telstar's 50th anniversary: http://tinyurl.com/Telstar-50th (www.spacemart.com)

[ANS thanks AMSAT, Project OSCAR, and SpaceMart.com for the above information]

Satellite Shorts From All Over

+ Look in the August 2012 issue of QST magazine for a satellite article, "Backpacking With Satellites", on page 65 by David Palmer, KB5WIA. Dave covers lots of portable satellite operating advice, portable equipment selection, trek planning, and includes several interesting photos.

+ Listen for Patrick, WD9EWK/VA7EWK on VO-52 at 0200 UTC July 17 during his on-air satellite demonstration at the Tri-City Amateur Radio Association meeting in Goodyear, Arizona. Additional demonstration opportunities that evening may occur on SO-50 at 0300 UTC and one more VO-52 pass at 0335 UTC. All demonstration plans are dependent on the weather. Patrick will try to update the AMSAT-BB with the demonstration plans on Monday afternoon, as well as his Twitter feed @WD9EWK (use http://twitter.com/wd9ewk if you aren't on Twitter directly to view this feed).

+ Listen for David, XE3DX operating on SO-50 and AO-27 between July 16 - 20 from EK48, EK49, EK69, EL50, EL51, EL61 and EL60 in Campeche, Yucatan and Quintana Roo States in Mexico. He can

be reached via e-mail at xe3dx@amsat.org

+ Listen for Norm, N3YKF operating from Peru. His trip begins on
July 22. He says he has received the customs documents to bring
amateur radio equipment. He plans to drive the Panamerica Sur
from Lima to Nazca, Peru, activating grid squares along the way.

+ Watch a video on the Vimeo site "Grand Finale 2010-11", by McLean
Fahnestock showing all 135 launches of the space shuttle program
at once: http://vimeo.com/27505192

+ To help you sound like the smartest ham on the band here are three
videos that explain CERN's discovery of a Higgs-like particle:

o Minute Physics: http://www.youtube.com/watch?v=h5mTxRQcg
o BBC http://www.youtube.com/watch?v=QpeqE_wLg
o Physicist Michio Kaku on CNN:
http://www.youtube.com/watch?v=VT-MlRq6o
o What's a Higgs Boson, Anyway? on UniverseToday.com:
http://www.universetoday.com/96122/whats-a-higgs-boson-anyway/

+ The free publication SatMagazine includes an article covering
advances in CubeSat technology. "Advances In CubeSats Enable New
Apps" by Erik Mumm starts on page 56. Download the July/August 2012
SatMagazine at http://www.satmagazine.com/2012/SM_JulAug2012.pdf

+ In the quiet, peaceful setting of a storage bay in the northwest
corner of NASA's cavernous Vehicle Assembly Building at the Kennedy
Space Center Spaceflight Now photographer Walter Scriptunas II used
the tranquil opportunity to shoot this gallery that captures the
space shuttle Atlantis in exquisite detail:
http://spaceflightnow.com/shuttle/sts135/120703gallery/

+ When you play NASA's "Rocket Science 101!", you will select your
favorite NASA mission and build a rocket to send the spacecraft
into orbit. Rocket Science 101 is available online at:
http://go.nasa.gov/Mn28Nt

+ Enjoy a 5 minute video commemorating the 50th anniversary of
NASA's John F. Kennedy Space Center:
http://www.youtube.com/watch?feature=player_embedded&v=GEU5irS8o

+ Jason Brand VK2FJAB, age 10, was interviewed for the morning
"Today" show on Channel 9 in Australia. He talks about amateur
radio and his Do-It-Yourself space projects. Watch it at:
http://www.uk.amsat.org/8821

+ One of the interior decorating features often selected for the
well-equipped-shack includes a copy of the Electromagnetic Radia-
tion Spectrum Poster. Unihedron, a manufacturer of portable tools
for physics and astronomy, offers you a link to download a personal
PDF copy of the poster or purchase a full-size printed copy at:
http://unihedron.com/projects/spectrum/moreinfo.php

+ This image from the French Pleiades satellite shows the island of Mont Saint Michel and its surrounding bay in northwest France. The photo was captured on May 3 at an altitude of about 700 km. See: http://www.spaceref.com/news/viewsr.html?pidA338

+ Sometime this summer, Austrian skydiver Felix Baumgartner will leap from the edge of space, attempting to not only break the sound barrier with his body, but also break the record for the longest freefall from nearly 37km altitude. View a video simulation at:
http://www.youtube.com/watch?feature&#65533;ayer_embedded&v&#65533;qnQq86fkY

+ The next Hudson Valley Satcom net date will be on Thursday July 19 at 8PM EDT (UTC-4 UTC) on the 146.97 MHz MBARC Repeater (PL 100). This net is also available on echolink on the N2EYH-L node if you would like to join via this route. (Stu, WA2BSS)

[ANS thanks everyone for the above information]

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In addition to regular membership, AMSAT offers membership in the President's Club. Members of the President's Club, as sustaining donors to AMSAT Project Funds, will be eligible to receive additional benefits. Application forms are available from the AMSAT Office.

Primary and secondary school students are eligible for membership at one-half the standard yearly rate. Post-secondary school students enrolled in at least half time status shall be eligible for the student rate for a maximum of 6 post-secondary years in this status. Contact Martha at the AMSAT Office for additional student membership information. And with that, please keep in mind the discussion during Field Day setup when one ham was admiring the new tent being erected at an operating position. The owner remarked on the great deal he got on the purchase of the tent getting it at half price. The ham said, "Yes, it is a great deal!" The owner noted it was the year of his discount tent. (Apologies to Richard The Third and Willy Shakespeare.)

73,
This week's ANS Editor,
JoAnne Maenpaa, K9JKM
K9JKM at amsat dot org

105. Weekly Highlights of Solar and Geomagnetic Activity, 09 - 15 July 2012

Newsgroup: rec.radio.amateur.space
Date: 2012-07-16 15:30:10 UTC
From: SWPC.Webmaster@noaa.gov
Message-ID: <20120716153002.D70E233C6F@panix2.panix.com>
Source record: 205
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.dx,rec.radio.amateur.space,rec.radio.shortwave,rec.radio.info

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:Product: Weekly Highlights and Forecasts
:Issued: 2012 Jul 16 1434 UTC
# Prepared by the US Dept. of Commerce, NOAA, Space Weather Prediction Center
# Product description and SWPC contact on the Web
# http://www.swpc.noaa.gov/weekly.html
#
# Weekly Highlights and Forecasts
#
Highlights of Solar and Geomagnetic Activity
09 - 15 July 2012

Solar activity ranged from low to high levels due to activity from a
complex of closely spaced regions in the southern hemisphere. These
spotted groups were made up of Regions 1519 (S15, L=107, class/area
Hsx/120 on 05 July), 1520 (S16, L=86, class/area Fkc/1460 on 12
July), and 1521 (S21, L=96, class/area Eki/300 on 12 July). Region
1520 grew into a large Fkc spot group with a Beta-Gamma-Delta
magnetic configuration with over 1300 millionths in area by 09 July
and continued to remain large and magnetically complex as it rotated
across the visible disk. Region 1520 produced M1 flares at 09/2307
UTC and 10/0514 UTC, an M2/1f flare at 10/0627 UTC, and a long
duration X1/2b flare at 12/1649 UTC. Associated with the X1/2b flare
were Type II (1268 km/s) and Type IV radio emissions along with an
800 sfu Tenflare and a geoeffective CME with an estimated
plane-of-sky speed of 1453 km/s. Region 1521 produced an M1/1f flare
at 14/0458 UTC. Region 1521 continued to grow through the period
into an Eki spot group with 300 millionths of area and a Beta-gamma
magnetic classification.

A greater than 10 MeV proton event at geosynchronous orbit began at
09/0130 UTC, reached a maximum of 19 pfu at 09/0430 UTC and ended at
09/1445 UTC. This event was likely associated with the 08 July M6/1n
flare at 08/1632 UTC from Region 1515 (S18, L=206, class/area
Fhc/900 on 06 July). A second greater than 10 MeV proton event began
at 12/1835 UTC, reached a maximum of 96 pfu at 12/2225 UTC, and
ended at 15/0200 UTC. This event was associated with the X1/2b flare
at 12/1649 UTC from Region 1520.

The greater than 2 MeV electron flux at geosynchronous orbit was at
moderate levels on 09 and 15 July, but reached high levels 10
through 14 July.

Geomagnetic field activity was at unsettled to minor storm levels,
on 09 July, with high latitude major storm intervals due to residual
```

CME effects likely associated with the 04 July M1 event. July 10 began with an isolated period of active levels and decreased to quiet to unsettled levels for the remainder of the day. On 11 and 12 July, activity was mostly quiet to unsettled with an isolated active period with high latitude intervals of minor to major storm levels. Quiet conditions were observed from 13 July till late on 14 July when a CME associated with the 12 July X1/2b flare arrived. At 14/1728 UTC, a shock was observed at the ACE spacecraft followed by a sudden impulse (27 nT) at the Boulder magnetometer at 14/1811 UTC. Solar wind speed at the ACE spacecraft increased from approximately 350 km/s to 630 km/s while the Bz component of the interplanetary magnetic field (IMF) went south to around -12 nT. At around 15/0600 UTC, solar wind speed was around 600 km/s while the IMF Bz went south around -16 nT and stayed steadily southward through the end of the period. The geomagnetic field responded with active to major storm levels while minor to severe storm conditions were observed at high latitudes through the end of the summary period.

Forecast of Solar and Geomagnetic Activity
16 July - 11 August 2012

Solar activity is expected to be at low to moderate levels through 18 July when Region 1520 is due to rotate off the West limb. Very low to low conditions are expected from 19 July through 20 July. Low to moderate conditions are expected from 21 July through the end of the period as old Regions 1515 and 1520 are due to return on 21 July and 01 August respectively.

There is a slight chance for a greater than 10 MeV proton event at geosynchronous orbit until Region 1520 departs the visible disk on 18 July and again from 21 July through 11 August as old Regions 1515 and 1520 return.

The greater than 2 MeV electron flux at geosynchronous orbit is expected to be at normal to moderate levels from 16 - 22 July, 24 - 27 July, and 03 - 11 August. High levels are expected on 23 July and again on 28 July - 02 August due to recurrent coronal hole effects.

Geomagnetic field activity is expected to begin the period with minor to major storm periods due to the continued influence of the 12 July CME. Conditions will gradually return to quiet to active levels by the end of the day on 16 July. Mostly quiet to unsettled conditions are expected from17 - 21 July. On 22 - 23 July a coronal hole high speed stream is expected to become geoeffective causing mostly unsettled conditions. Quiet to unsettled conditions will prevail from 24 - 26 July. On 27 July, a co-rotating interaction region followed by a recurrent coronal hole high speed stream is expected to become geoeffective. Active to minor storm conditions are expected on 27 July while unsettled to active conditions are expected on 28 - 29 July. Conditions are expected to return to quiet to unsettled levels on 30 July through the end of the forecast period.

106. ANS-204 AMSAT News Service Weekly Bulletins

Newsgroup: rec.radio.amateur.space
Date: 2012-07-22 01:14:48 UTC
From: JoAnne Maenpaa <k9jkm@comcast.net>
Message-ID: <002401cd67a7$5ced5730$16c80590$@net>
Source record: 206
Cross-posted to: rec.radio.amateur.space,rec.radio.info

AMSAT NEWS SERVICE
ANS-204

ANS is a free, weekly, news and information service of AMSAT North America,
The
Radio Amateur Satellite Corporation. ANS reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in
designing, building, launching and communicating through analog and digital
Amateur Radio satellites.

Please send any amateur satellite news or reports to:

ans-editor@amsat.org

In this edition:
* UK Olympics Special Events Satellite Operations Commence This Week
* AMSAT Board of Directors 2012 Ballots in the Mail
* AMSAT Commemorative Shirt Available for the Symposium
* AMSAT and ARISS Support Moon Day 2012 at Dallas Love Field Air Museum
* Three Hams Arrive + Three Hams Aboard ix Hams Aboard ISS
* NASA JPL Explore Mars: Curiosity 3-D Interactive Experience
* Satellite Shorts From All Over
* ARISS Status - 16 July 2012

SB SAT @ AMSAT $ANS-204.01
ANS-204 AMSAT News Service Weekly Bulletins

AMSAT News Service Bulletin 204.01
From AMSAT HQ SILVER SPRING, MD.
July 22, 2012
To All RADIO AMATEURS
BID: $ANS-204.01

UK Olympics Special Events Satellite Operations Commence This Week

With the "London 2012 Olympics" official opening taking place during the next week, this is a reminder of the previously posted information about the "Amateur Radio Flagship Event Stations" that will be opera-ting beginning Wednesday July 25 until the Games close on September 9.

The London station 2012L (two-oscar-one-two-London) and the station in Wales (two-oscar-one-two-Wales) will be operating on amateur HF and VHF/UHF bands during the event.

The Barry Amateur Radio Society in Wales, subject to operator availability and suitable passes, will endeavor to make contacts via the amateur radio satellites as well of course as the HF bands.

The London has a restriction imposed on VHF/UHF activation which will limit personal operations on the satellites. Outside the restricted zone however there maybe other amateur radio operators who may be active, not as "flagship stations" but using a personal or club call sign under a notice of variation.

Barry Amateur Radio Society in Wales looks forward to making as many contacts as possible for this rare opportunity. We take this as an opportunity to wish all those participating in the Olympic Games and amateur radio operators world wide "Good Luck".

[ANS thanks Ken Eaton, GW1FKY and the Barry Amateur Radio Society, Wales, UK for the above information]

AMSAT Board of Directors 2012 Ballots in the Mail

Ballots for the 2012 AMSAT-NA Board of Directors election have been mailed to all members. Also included is biographical information about each of the candidates.

Select no more than three of the six listed candidates (in alphabetitcal order):

+ Tom Clark, K3IO
+ Steve Coy, K8UD
+ Mark Hammond, N8MH
+ Lou McFadin, W5DID
+ Gould Smith, WA4SXM
+ Patrick E. Stoddard, WD9EWK

The 3 candidates receiving the most votes will become directors serving 2 year terms. The 2 receiving the next highest number of votes will be seated as alternates for 1 year terms.

You must mail your ballot back to be received at the AMSAT-NA Office no later than the close of business on September 15, 2012:

AMSAT
850 Sligo Avenue, #600
Silver Spring, MD 20910

[ANS thanks AMSAT Corporate Secretary Alan Biddle, WA4SCA for the above information]

AMSAT Commemorative Shirt Available for the Symposium

AMSAT offers you the chance to have the coolest ham shirt of the year as we announce the special commemorative shirt for the 2012 Symposium.

The polo shirt is ultramarine blue, silk touch 5-ounce 65/35 poly/
cotton pique fabric (ask the XYL what this means) in men's and ladies'
styles.

The men's shirt is available in sizes XS to 6X, with a pocket on the
left side:
+ XS - XL ... $20
+ 2X - 3X ... $23
+ 4X - 6X ... $28

The ladies' shirt is available in sizes XS to 6X, no pocket:
+ XS - XL ... $18
+ 2X - 3X ... $21
+ 4X - 6X ... $26

The Symposium logo (AMSAT Fox) is embroidered on the left side of
the men's and ladies' shirts. You can optionally add up to 2 lines
of your callsign/name embroidered on the right side of the shirt for
$5 per shirt.

Shirts must be ordered by mail with the order form sent with the
AMSAT ballots.

[ANS thanks the AMSAT Office for the above information]

AMSAT and ARISS Support Moon Day 2012 at Dallas Love Field Air Museum

Moon Day 2012 was held on July 21 at the Frontiers of Flight Museum
at Love Field in Dallas, Texas to commemorate Neil Armstrong's walk
on the moon. The event featured space exhibits, demonstrations and
other space activities. AMSAT and ARISS were represented as they showed
amateur radio satellites including a model of the Fox-1 satellite.
This was an opportunity to promote the ARISS program also.

The purpose of Moon Day is to celebrate this astounding achievement
of humankind by bringing together local and national organizations
into one place where the public can walk and talk with the people
and the groups who are on the frontlines of space exploration, along
with space and astronomy advocates, hobbyists, and educators.

More information about the event was posted at:
http://nightsky.jpl.nasa.gov/event-view.cfm?Event_ID7613

The Frontiers of Flight Museum web page can be found at:
http://www.flightmuseum.com/

You can re-live the Apollo 11 launch on July 16, 1969 with this video:
http://www.youtube.com/watch?v&#65533;AN2WsDVt8&feature&#65533;ayer_embedded

[ANS thanks AMSAT and ARISS for the above information]

Three Hams Arrive + Three Hams Aboard ♦ix Hams Aboard ISS

Three hams arrived at the International Space Station on July 17 when the Soyuz TMA-05M spacecraft docked and the hatches opened on the 37th anniversary of the Apollo-Soyuz docking.

Expedition 32 crew members NASA astronaut Suni Williams KD5PLB, cosmonaut Yury Malenchenko RK3DUP and Japanese astronaut Aki Hoshide KE5DNI joined with Expedition 31's NASA astronaut Joe Acaba KE5DAR and cosmonauts Gennady Padalka RN3DT and Sergei Revin RN3BS to bring the crew complement up to six.

Video of the hatch opening, welcome aboard, and the press conference from the ISS have been posted at: http://tinyurl.com/Soyuz-Arrival (UniverseToday.com)

Padalka, Acaba and Revin will be on board until September 17th, and the newest crew will stay until November 12, 2012.

[ANS thanks NASA and UniverseToday.com for the above information]

NASA JPL Explore Mars: Curiosity 3-D Interactive Experience

NASA's Jet Propulsion Laboratory in Pasadena, California invites you to prepare for the arrival of the Mars Science Laboratory rover Curiosity on August 6. JPL has developed a new 3-D interactive experience which will allow you to follow along with Curiosity's discoveries on Mars.

The beta version of "Explore Mars: Curiosity", a new 3-D interactive experience can be found at: http://mars.jpl.nasa.gov/msl/participate/

When you first access this site you will be asked to download the Unity application which loads seamlessly with your web browser. Once started you will receive high-resolution terrain maps of Gale Crater, Curiosity's landing site, collected from Mars orbiters. A 3-D "virtual rover" version of Curiosity will follow the path of the real rover as it makes discoveries.

JPL advises interested Mars fans to download the Unity game environment and test drive the rover early to reduce potential download delays as global interest peaks during the August landing events.

Also available on the JPL Mars Science Laboratory web site is the Mars Rover Landing immersive experience for the Xbox 360. You will able to take control of your own spacecraft using Kinect and face the extreme challenges of landing a rover on Mars. More details are available on the web site.

MarsDaily.com has a related article: http://tinyurl.com/MarsDaily

[ANS thanks NASA JPL and MarsDaily.com for the above information]

Satellite Shorts From All Over

+ Listen for special event station N8M operating from the Henry Ford/ Greenfield Village (Detroit) Maker Faire July 28-29. They will be operating on all bands, all modes including satellite and 6 meters. Satellite operation will be active on all modes on as many passes as possible. QSL info can be located on the Ford Amateur Radio League website: http://www.k8utt.org/index.htm (via John, N8NWA)

+ Listen for Canadian special event station CG3B operating from FN03 on the satellites. The special event commemorates 200 years of friendship between Canada and the US (after the War of 1812). More information is posted on the callsign page on QRZ.com. You can QSL via VE3FOI and your QSL will be mailed to you a special issue 1812 Canadian stamp. The event is sponsored by the Niagara Peninsula Amateur Radio Club (via John, K8YSE)

+ The ARRL posted audio and video of the July 12 interview with ARRL News Editor S. Khrystyne Keane K1SFA and Astronaut Don Pettit, KD5MDT. The video and transcript is posted at: http://www.arrl.org/news/astronaut-don-pettit-kd5mdt-chats-with-arrl

+ The August QST Magazine features activities by amateur satellite operators. On page 20 you will find coverage of the SSTV contact via ARISSat-1 by Farrell Winder, W8ZCF, and Jeff Winder, KB8VCO. On page 63 "Long Haul Radio" discusses amateur radio operation from an 18-wheeler including mention of packet via ISS by John McLendon, AB8JL. Bob Bruninga, WB4APR, well known to satellite operators has an article on page 41, "Rethinking Electrical Power for the Ham."

+ As a friendly reminder, we are approaching the deadline for article submissions for the next issue of the AMSAT Journal. Please finish your articles and submit them to journal@amsat.org by July 23.

+ Watch the inspirational video, "The Audacity to Dream" on-line at: http://www.universetoday.com/96289/the-audacity-to-dream/ The description reads, "Making its debut at the TEDxISU (International Space University) event on July 6, the video above is an inspirational call-to-arms for anyone who's ever looked to the stars and dreamed of a day when the sky was, in fact, not the limit.

+ A new schedule was uploaded to AO-27 on July 4th. Users of the Java AO-27 Satellite Schedule Lister should make sure that you have downloaded the latest data files: https://sites.google.com/site/ao27satellitescheduler/ (George, KA3HSW)

ARISS Status - 16 July 2012

1. Upcoming School Contact

ESA Space Camp, which is being held at St. Columba's College, Whitechurch,
Dublin, Ireland, has been scheduled for an Amateur Radio on the International
Space Station (ARISS) contact on Sunday, July 22 at 17:25 UTC via telebridge
station W6SRJ in California. The ARISS contact is
part of an educational program
of which some activities are based around Andr Kuipers mission, Spaceship
Earth. Children at the camp will have 2 weeks of space education covering
the
themes of Climate, Biodiversity and the Human Body as well as Earth Observation
and the Solar System. The children will also receive lessons about how to
communicate with the crew on the ISS from a ham radio expert.

2. ARISS Contact with Women in STEM

An Amateur Radio on the International Space Station (ARISS) contact was held
with Women in STEM High School Aerospace Scholars in Houston, Texas on Tuesday,
July 10 via telebridge station W6SRJ in California. The high school girls
came
from across the U.S. to participate in the program which provided them the
opportunity to plan a space exploration mission and to learn from women that
work at NASA. Joe Acaba, KE5DAR on ISS answered 23 questions during the Q&A
session. Approximately 150 students and guests were present for the event.
Video may be viewed here:
http://www.youtube.com/watch?v M-2qegJWo&feature utu.be

3. Expedition 30/31Crew Scheduled for Debrief

Astronauts Don Pettit and Andr Kuipers (Expedition 30/31) will take part in
a
debrief session to give feedback on the ARISS program. The debrief is currently
scheduled for August 15.

[ANS thanks Carol, KB3LKI, for the above information]

/EX

In addition to regular membership, AMSAT offers membership in the President's Club. Members of the President's Club, as sustaining donors to AMSAT Project Funds, will be eligible to receive additional benefits. Application forms are available from the AMSAT Office.

Primary and secondary school students are eligible for membership at one-half the standard yearly rate. Post-secondary school students enrolled in at least half time status shall be eligible for the student rate for a maximum of 6 post-secondary years in this status. Contact Martha at the AMSAT Office for additional student membership information.

73,
This week's ANS Editor,
Lee McLamb, KU4OS

107. Weekly Highlights of Solar and Geomagnetic Activity, 16 - 22 July 2012

Newsgroup: rec.radio.amateur.space
Date: 2012-07-23 15:30:07 UTC
From: SWPC.Webmaster@noaa.gov
Message-ID: <20120723153002.55A2C33C6F@panix2.panix.com>
Source record: 207
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.dx,rec.radio.amateur.space,rec.radio.shortwave,rec.radio.info

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:Product: Weekly Highlights and Forecasts
:Issued: 2012 Jul 23 1249 UTC
# Prepared by the US Dept. of Commerce, NOAA, Space Weather Prediction Center
# Product description and SWPC contact on the Web
# http://www.swpc.noaa.gov/weekly.html
#
# Weekly Highlights and Forecasts
#
Highlights of Solar and Geomagnetic Activity
16 - 22 July 2012

Solar activity ranged from very low to high levels. Region 1520
(S16, L=86, class/area Fkc/1460 on 12 July) was responsible for most
of the flares during the week, including the largest. High activity
occurred on 19/0558 UTC when Region 1520 produced the largest flare
of the week, an M7 accompanied by Type II (estimated velocity 1110
km/s) and Type IV radio sweeps, a 1000 sfu Tenflare, and a
partial-halo CME. Activity was at moderate levels two days earlier
when Region 1520 produced a long-duration M1/1f flare and
partial-halo CME on 17/1715 UTC. The same region produced two days
of low activity, with a C7/Sf at 16/2003 UTC and a C4 flare at
18/2218 UTC. With the exception of one C1 flare at 21/2324 UTC from
Region 1526 (S18, L=266, class/area Bxo/10 on 21 July), very low
levels of activity persisted from the 20th through the remainder of
the week as Region 1520 rotated around the west limb.

A greater than 10 MeV proton event began at 17/1715 UTC, reached a
maximum flux of 136 pfu at 18/0600 UTC, and ended at 21/0310 UTC.
This event was associated with the long-duration M1/1f event on 17
July. The greater than 100 MeV proton flux showed a slight
enhancement late on 17 July.

The greater than 2 MeV electron flux at geosynchronous orbit was at
moderate levels on 16 July, increased to high levels 17-21 July, and
decreased to moderate levels on 22 July.

Geomagnetic field activity ranged from quiet to major storm levels.
Activity on 16 July began at major storm levels and decreased to
unsettled levels as the day passed. 17 July saw quiet to active
levels with a periods of minor to major storm levels at high
latitudes. The increased activity was attributed to lingering
effects from a CME which arrived late on 14 July. Quiet levels
followed on 18-19 July. Data from the ACE spacecraft suggested the
CME from 17 July swept past on the 20th, and the CME from 19 July
```

passed on the 21st. This brought quiet to unsettled conditions, with intervals of active to minor storm conditions at high latitudes, from the 20th through the end of the week.

Forecast of Solar and Geomagnetic Activity
23 July - 18 August 2012

Solar activity is expected to be at very low levels with a chance for C-class events until 29 July when activity is expected to increase to low levels due to the return of old Region 1522 (N11, L=099). The return of old Regions 1519 (S15, L=107) and 1520 are expected to bring moderate activity levels with a slight chance for X-class events, from 30 July through 13 August. Activity is expected to return to mostly low levels for the remainder of the period as Regions 1519 and 1520 depart.

A greater than 10 MeV proton event above 10 pfu is possible with a slight chance for major flare activity from 30 July to 13 August.

The greater than 2 MeV electron flux at geosynchronous orbit is expected to be at normal to moderate levels on 23-27 July, 3-5 August, and 11-15 August. High levels are expected from 28 July to 2 August and on 6-10 August.

Geomagnetic field activity is expected to be at quiet to unsettled levels with isolated active periods for the first three days (23-25 July) as a coronal hole high speed (CH HSS) stream becomes geoeffective. Activity is expected to decrease to mostly quiet levels on 26-27 July, then increase to unsettled to active periods through 30 July as a recurrent negative polarity CH HSS becomes geoeffective. Quiet to unsettled conditions are then expected for the remainder of the forecast period.

108. ANS-211 AMSAT News Service Weekly Bulletins

Newsgroup: rec.radio.amateur.space
Date: 2012-07-29 01:42:03 UTC
From: JoAnne Maenpaa <k9jkm@comcast.net>
Message-ID: <000101cd6d2a$a15a34f0$e40e9ed0$@net>
Source record: 208
Cross-posted to: rec.radio.amateur.space,rec.radio.info

AMSAT NEWS SERVICE
ANS-211

ANS is a free, weekly, news and information service of AMSAT North America, The Radio Amateur Satellite Corporation. ANS reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in designing, building, launching and communicating through analog and digital Amateur Radio satellites.

Please send any amateur satellite news or reports to:
ans-editor at amsat.org

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* August 2 Atlas Launch From Vandenberg to Launch Four ELaNa Cubesats
* First US Woman Astronaut Sally Ride Passes
* Satellite Shorts From All Over

SB SAT @ AMSAT $ANS-211.01
ANS-211 AMSAT News Service Weekly Bulletins

AMSAT News Service Bulletin 211.01
>From AMSAT HQ SILVER SPRING, MD.
July 29, 2012
To All RADIO AMATEURS
BID: $ANS-211.01

Appointment of KA3HDO as VP-Human Spaceflight Programs

AMSAT-NA President Barry Baines is pleased to announce that effect-ive August 1, 2012, Frank Bauer, KA3HDO, will be returning as AMSAT's Vice President for Human Spaceflight Programs. This role will in-clude AMSAT's leadership on the Amateur Radio on the International Space Station (ARISS) Program and amateur radio operations pursuits on other Human Spaceflight vehicles proposed by NASA, International Space Agencies and domestic and international commercial spaceflight organizations.

Bauer made the following comment regarding his reappointment: "I look forward to working again with AMSAT as we bring the excitement of human space exploration pursuits and amateur radio communications into the communities of the world, inspiring youth to pursue Science, Technology, Engineering and Math (STEM) careers".

Frank Bauer stepped down as V.P. for Human Spaceflight in May 2009 due to increasing work responsibilities at NASA. At the time, Bauer was Chief Engineer for the Exploration Systems Mission Directorate at NASA HQ. He retired from NASA in September 2011. However, Bauer has been unable to fully support ARISS or other human spaceflight pursuits due to a post-retirement one year "cooling off" period with NASA and with the International Space Agencies. President Barry Baines clarifies: "Effective September 3, Frank will be able to communicate with NASA and the other International Space Agency officials again. Until then, Frank will start working with the AMSAT Board and Senior executives in re-establishing his role within the AMSAT-NA community". He further adds: "Once he is able to fully engage, Frank intends to work with AMSAT, NASA, the ARRL, the ARISS team and the International space community to continue to evolve and expand the ARISS program. And to work with the commercial spaceflight community on potential new endeavors as they develop and evolve their human spaceflight vehicles."

The V.P. for Human Spaceflight is a position that is appointed by the AMSAT President that provides leadership and guidance to the AMSAT President, BoD and executives on AMSAT's Human Spaceflight Operations and Development.

[ANS thanks AMSAT President Barry Baines, WD4ASW for the above information]

2012 AMSAT Space Symposium Call For Papers

AMSAT announces the 2012 AMSAT Space Symposium will be held on Friday, October 26th through Sunday, October 28th at the Holiday Inn, Orlando-International Airport, Orlando, Florida.

Symposium Proceedings Editor, Dan Schultz, N8FGV is eagerly awaiting your abstract about the title/topic of your paper and presentation as soon as possible.

Final copy to be submitted by October 1 for inclusion in the printed proceedings.

Proposals for papers, symposium presentations and poster presentations are invited on any topic of interest to the amateur satellite community:

+ Papers for publication in the Proceedings

+ Symposium Presentations

+ Poster Presentations

+ Equipment and Operating Demonstrations

Abstracts and papers should be sent to Dan Schultz, N8FGV, at
n8fgv at amsat.org.

Watch the AMSAT Symposium Web Pages for the latest information:
http://www.amsat.org/amsat-new/symposium/2012/index.php

[ANS thanks Symposium Proceedings Editor, Dan Schultz, N8FGV for
the above information]

ARRL Names Satellite Operator WA4OVO Instructor of the Year

The ARRL Board of Directors announced at their July meeting they
have selected Joe Lowenthal, WA4OVO, of Memphis, Tennessee, as the
recipient of the 2012 Herb S. Brier Instructor of the Year Award.
Joe is also an amateur satellite operator.

The Board noted that Lowenthal "has a demonstrated record as an outstanding instructor for Amateur Radio classes, with hundreds of students benefitting from his expertise in the classroom and generous mentoring."

The Award cites Joe's skills in his use of creative instructional
approaches, demonstrated success rate in students passing thier exam,
personal enthusiasm, ability to recruit students, and he models the
highest values of the amateur radio community

Herb S. Brier, W9AD, long-time CQ Novice Editor, represented the
spirit of effective, caring Amateur Radio instruction. The ARRL, in
conjunction with the Lake County (Indiana) Amateur Radio Club, spon-
sors this award in his memory to recognize the very best in volunteer
Amateur Radio instruction and recruitment.

[ANS congratulates Joe Lowenthal, WA4OVO and thanks Rick Tillman,
WA4NVM and the ARRL for the above information]

Successful ARISS School Contacts This Week

ESA Space Camp, Dublin, Ireland

An Amateur Radio on the International Space Station (ARISS) school
contact with the ESA Space Camp, Dublin, Ireland was successfully
completed on July 22.

The European Space Agency has locations in several European coun-
tries. The annual summer space camp is an occasion when the chil-
dren of staff employed at ESA get a chance to mix with each other
in an environment which allows them to be immersed in space activ-
ities and cultural events. This year the 160 ESA campers stayed in

a traditional "Harry Potter" style boarding school near Dublin, in a country full of mystical stories and a breath taking landscape.

As part of their 2 week stay at the camp, the children aged 8-17 years, took part in sporting events, field trips where they will explore more about what earth is made of, look more closely at how we explore other planets and design their own launchers and space suits. They will be visited by an ESA astronaut who will join in the activities and explain about astronaut training and human spaceflight.

Women in Engineering Program at Rochester Institute of Technology
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An Amateur Radio on the International Space Station (ARISS) school contact with the Women in Engineering Program at Rochester Institute of Technology (WE@RIT), Rochester, NY was successfully completed on July 23. WE@RIT is dedicated to increasing the representation of women engineers and women leaders within the engineering profession. Founded in 2003, WE@RIT strives towards achieving gender parity within the Kate Gleason College of Engineering and hosts a comprehensive series of pre-engineering outreach, recruitment, and community building programs in support of this vision.

Astronaut Sunita Williams, KD5PLB was operating the Kenwood TM-D700 ham radio station located in the International Space Station's Service Module using the callsign NA1SS on 145.800 MHz. The station at the Rochester Institute of Technology used the callsign W2RIT.

See the press release on the Rochester Institute of Technology web: http://www.rit.edu/news/story.php?idI247

Television coverage of RIT on TV News: Chat with International Space Station: http://www.youtube.com/watch?v=vQnA4WTxI

Irkutsk, Russia

An Amateur Radio on the International Space Station (ARISS) school contact with the 2nd International Industrial Forum of Youth, "Engineers Future 2012", in Irkutsk, Russia was successfully completed on July 23. This was a direct contact via RK3SWB. No additional school information was available at press time.

Virginia Air and Space Center

An Amateur Radio on the International Space Station (ARISS) school contact with the Virginia Air and Space Center, Hampton, VA was successful on July 26. The contact was carried on a direct link between NA1SS aboard the Space Station and KE4ZXW at the Museum.

The Virginia Air and Space Center is a non-profit education center that serves as the Visitor Center for NASA Langley Research Center as well as being home to the NASA LaRC Educator Resource Center.

The Center offers education programs to schools, scouts, home schoolers, and the general public. They host ERC and NASA teacher workshops, STEM activities, events such as NASA's Sun-Earth Day, and the International Observe the Moon Night. They serve the community at large and provide programming for the under-served youth population.

Their on-site ham radio station was used for this contact. It is used to educate students and the public on what ham radio is, how it works, and how satellites work as a means for communication.

[ANS thanks ARISS for the above information]

ARISS Contact Announced for Scouting Space Jam 6

Space Jam 6 takes place August 3-5 at the Chanute Air Museum in Rantuol, IL. (near Champaign-Urbana, 3 hours south of Chicago)

The Space Jamboree Workshop (or just Space Jam for short), is the midwest's largest technology oriented gathering of all Boy Scouts and Girl Scouts.

Put on by Explorer Crew 272 of Fountain County, IN, and Troop 17 of Champaign, IL, Space Jam is about fun with a purpose: their mission is to see Scouts go on to become scientists, engineers, entrepreneurs, teachers, musicians, technicians, and much more. Boy Scouts, Girl Scouts, and Webelos are all welcome to continue and develop excellence in teaching and share what we learn.

Planned activities include hands-on coaching and learning in high tech merit badge fields covering 31 topics in electronics, aviation, aerospace, computers. Additional opportunities will include:

+ International Space Station Radio Contact
+ Live NASA Digital Learning Network Video Contact
+ High Altitude Balloon Launch
+ Amateur ("Ham") Radio
+ Search and Rescue Demonstration

The ARISS contact is scheduled for Sunday, August 5 at 10:06:53 UTC. Explorer Crew 272's WB9SA station will provide a direct connection with NA1SS on the 58 degree elevation pass over the midwest. Stations in the United States will be able to copy the 145.800 MHz downlink.

Space Jam 6 details are posted at:
http://www.spacejamboree.com/

[ANS thanks Space Jam 6 and the ARISS Contact Schedule by Charlie Sufana, AJ9N for the above information]

Replacement Ericsson VHF Radio in Preparation for ISS Columbus Module

The ARISS International Team Teleconference held on Tuesday, July 17, 2012, reported that a team lead by ISS Amateur Radio Project Engineer Kenneth Ransom, N5VHO were in the final stages of preparing the certification for flight of a replacement radio for the Ericsson VHF radio currently aboard the Columbus Module. The radio will be launched to the ISS aboard an upcoming re-supply mission.

The ARISS UHF digipeater on 437.550 MHz, which has operated in parallel with the 145.825 MHz system, has continued operation on 437.550 MHz (up/down) after the VHF digi is temporarily off the air. The same digi alias ARISS on UHF is still used.

This change was started with the docking of the ESA Automated Transfer Vehicle (ATV). The ATV is an expendable, unmanned resupply spacecraft delivering propellant, water, air, payloads and experimental supplies to the International Space Station (ISS).

Packet operations were moved to the Columbus Module UHF radio when the Kenwood D700 radio was recently powered off due to needing an additional air purifier to support the ATV. Normally the air purifier is located in the ATV but recent power support issues related to the ATV and ISS necessitated the system be relocated to the Service Module. The purifier is now using the power outlet that the Kenwood radio normally uses. The Russian team has agreed to briefly power the purifier off for the scheduled ARISS school events but then will re-activate the purifier right afterwards. This appears to be a long term impact as ATV is currently scheduled to depart from ISS in September.

[ANS thanks Kenneth Ransom, N5VHO for the above information]

August 2 Atlas Launch From Vandenberg to Launch Four ELaNa Cubesats

On August 2, 2012 an Atlas V rocket will launch a combination of 11 satellites from Vandenberg Air Force Base in California for the US Government and NASA ELaNa university cubesats.

The primary mission will launch a pair of US Navy Ocean Surveillance Satellites (NOSS). These satellites carry equipment to track ships and aircraft by triangulation of radio transmissions. The two NOSS satellites have a combined weight of 6500 kg. They will separate a few days after being placed into a 1100 km circular orbit at 63° inclination.

This is the first Atlas V launch with modified helium tanks in the Centaur upper stage. The change has created room in the aft skirt to accommodate 8 P-POD dispensers for cubesats. This launch carries 11 cubesats, to be released into 470 x 770 km, 63° orbit about 3 hours

after launch and following maneuvers by the Centaur upper stage.

NASA ELaNa LAUNCH AND DEPLOYMENT
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3 P-Pods will carry 4 cubesats NASA sponsored "ELaNa VI" cluster:

(1) CINEMA (Cubesat for Ion, Neutral, Electron, Magnetic fields)
---
http://www.eecs.berkeley.edu/Pubs/TechRpts/2010/EECS-2010-83.pdf

+ First in a trio of identical nano-satellites studying Space Weather effects in near-Earth space, 3U cubesat from University of California at Berkeley,

+ Uplink uses a serial connection with a data rate of 9600 bps.

+ Downlinks for engineering telemetry and command are in the 2400-2450 MHz range; Science telemetry is in 2200-2300 MHz range.

+ 1 Mbps data rate, Reed-Solomon encoded bitstream.

(2) CSSWE (Colorado Student Space Weather Experiment)
---
http://lasp.colorado.edu/home/about/quick-facts-csswe/

+ 3U-CubeSat designed and developed by students at the University of Colorado at Boulder (CU-Boulder). The objective of the science mission is to address fundamental questions pertaining to the relationship between solar flares and energetic particles.

+ Downlink 437.345 MHz, 9k6 with AX25

(3) CP5 (PolySat)
---
http://polysat.calpoly.edu/CP5.php

+ California Polytechnic State University at San Luis Obispo mission with De-Orbiting Experiment Using A Deployed Thin-Film Mechanism.

+ Downlink 437.405 MHz at 1 watt, AFSK on LSB AX.25 over NRZI at 1200 baud, every 2 minutes, begins 3.5 hours after first turn-on

(4) CXBN (Cosmic X-Ray Background Nanosatellite)
---
http://universe.sonoma.edu/CXBNanosat/

+ Morehead State University mission to map the entire sky in the X-ray spectrum using high energy cosmic background radiation measurements in the 30-50 keV range. 2U cubesat.

+ Downlink 437.525 MHz, GFSK, AX.25

US Government PAYLOADS
---
5 P-PODs will carry 7 US Government payloads (list subject to confirmation):

(1) Aeneas
---
http://www.uk.amsat.org/9034
http://www.isi.edu/projects/serc/aeneas

+ Department of Homeland Security satellite technology demonstration program to track cargo containers worldwide, 3U cubesat built by the University of Southern California. Proof of concept mission to prove the concept of WiFi based tag tracking from Low Earth Orbit

+ First cubesat to deploy 2.4 GHz Dish Antenna. WIFI transmitter will transmit on 2425.0 MHz with 1 watt of output power.

+ Downlink 437.600 MHz AX25 1200 bps beacon every 10 seconds and a spread spectrum two-way link elsewhere in the 70cm band.

(2) ORSES (ORS Enabler Satellite)

+ Operationally Responsive Space office, 3U cubesat for the US Army Space and Missile Defense Command.

(3) Horus

+ One of a satellite pair (with Re) has optical sensors to detect orbiting payloads and debris for orbit measurement, 3U cubesat from Lawrence Livermore National Laboratory.

(4) Re

+ Second satellite of a pair (with Horus) has optical sensors to detect orbiting payloads and debris for orbit measurement, 3U cubesat from Lawrence Livermore National Laboratory,

(5, 6, 7) Aerocube 4A, 4B, 4C

+ Built and operated by the Aerospace Corporation for technical research.

[ANS thanks NASA, the CubeSat Teams noted above, AMSAT-UK, and Gunter's Space Page for the above information]

First US Woman Astronaut Sally Ride Passes

This week the space community noted the passing of NASA Astronaut Sally Ride. The press release (included below) best summarizes her remarkable career and contributions to science and space.

NASA OFFERS CONDOLENCES ON THE PASSING OF PIONEERING ASTRONAUT SALLY RIDE

WASHINGTON -- In a space agency filled with trailblazers, Sally K. Ride was a pioneer of a different sort. The soft-spoken California physicist broke the gender barrier 29 years ago when she rode to

orbit aboard space shuttle Challenger to become America's first woman in space.

"Sally Ride broke barriers with grace and professionalism -- and literally changed the face of America's space program," said NASA Administrator Charles Bolden. "The nation has lost one of its finest leaders, teachers and explorers. Our thoughts and prayers are with Sally's family and the many she inspired. She will be missed, but her star will always shine brightly."

"Sally was a personal and professional role model to me and thousands of women around the world," said NASA Deputy Administrator Lori Garver. "Her spirit and determination will continue to be an inspiration for women everywhere."

Ride's contribution to America's space program continued right up until her death at age 61 this week. After two trips to orbit aboard the shuttle, she went on to an award-winning academic career at the University of California, San Diego, where her expertise and wisdom were widely sought on matters related to space. She holds the distinction of being the only person to serve as a member of both investigation boards following NASA's two space shuttle accidents. She also served as a member of the Review of U.S. Human Spaceflight Plans Committee in 2009 which informed many of the decisions about NASA's current human spaceflight programs.

However, Ride's place in history was assured on June 18, 1983 when she rocketed into space on Challenger's STS-7 mission with four male crewmates.

"The fact that I was going to be the first American woman to go into space carried huge expectations along with it," Ride recalled in an interview for the 25th anniversary of her flight in 2008. "That was made pretty clear the day that I was told I was selected as a crew. I was taken up to Chris Kraft's office. He wanted to have a chat with me and make sure I knew what I was getting into before I went on the crew. I was so dazzled to be on the crew and go into space I remembered very little of what he said."

"On launch day, there was so much excitement and so much happening around us in crew quarters, even on the way to the launch pad," Ride said. "I didn't really think about it that much at the time -- but I came to appreciate what an honor it was to be selected to be the first to get a chance to go into space."

Ride joined NASA as part of the 2118 astronaut class, the first to include women. She and five other women, along with 29 men, were selected out of 8,000 applicants. The class became known as the "Thirty-Five New Guys" and reported to the Johnson Space Center the next summer to begin training. Ride trained for five years before she and three of her classmates were assigned to STS-7. The six-day mission deployed two communications satellites and performed a number

of science experiments.

Following that historic flight, Ride returned to space on another shuttle mission, STS-41G in 1984. The 8-day mission deployed the Earth Radiation Budget Satellite, conducted scientific observations of Earth, and demonstrated potential satellite refueling techniques. She was assigned to a third flight, but transitioned to a role on the Rogers Commission that investigated the Challenger accident after that shuttle was lost in January 1986. When the investigation was completed, she accepted a job as a special assistant to the NASA administrator for long range and strategic planning.

Ride left NASA in 1989 to join the faculty at the University of California, San Diego, as a professor of physics and director of the University of California's California Space Institute. In 2001, she founded her own company, Sally Ride Science, to pursue her long-time passion of motivating girls and young women to pursue careers in science, math and technology.

A native of Los Angeles, Ride graduated from high school there in 1968 and enrolled at Stanford University. At Stanford, she earned four degrees, including a doctorate in physics in 2118. She also was an accomplished athlete who played varsity tennis at Stanford after being nationally ranked as a youth.

Ride received numerous honors and awards during the course of her career. Most notably, she was inducted into the National Women's Hall of Fame and the Astronaut Hall of Fame, and received the Jefferson Award for Public Service, the von Braun Award, the Lindbergh Eagle, and the NCAA's Theodore Roosevelt Award.

[ANS thanks NASA for the above information]

Satellite Shorts From All Over

+ AMSAT Commemorative Shirt for the 2012 Symposium is only available by mail order. If you have not received a copy of the order form you can download and print a copy from the the link on the front page at: http://www.amsat.org. The deadline for receiving your mail order is September 21, 2012.

+ Listen for Norm, N3YKF now arrived in Lima, Peru and assessing his options for working the satellites. He reports a high noise level in Lima but has heard himself on AO-7 mode B. He will try different locations to operate via FO-29 and SO-50. He posted pictures of his setup in Peru at:
http://www.flickr.com/photos/n3ykf/7664016762/in/photostream

+ Here is your homework to get ready for Mars Science Laboratory, the Curiosity Rover's landing on Mars on August 5:

(1) This is film from 1978 called "19 Minutes to Earth" which looks at the discoveries made by the Viking orbiter and lander, which made its historic arrival on Mars 36 years ago, on July 20, 1976.
http://www.youtube.com/watch?feature"ayer_embedded&v"BZFjN9hvg

(2) Here is the "Seven Minutes of Terror" video from NASA Jet Propulsion Laboratory highlighting the incredible engineering feat it will be to land the Curiosity Rover onto the surface of Mars.
http://www.youtube.com/watch?v"_Af_o9Q9s&feature"ayer_embedded

(3) NASA Jet Propulsion Laboratory has released a video on July 24, "The Science of Curiosity: Seeking Signs of Past Mars Habitability discussing the scientific mission of the rover.
http://www.youtube.com/watch?v"LbXTOaw7w&feature"ayer_embedded

(4) Actor Wil Wheaton, "The Next Generation's" Wesley Crusher, hosts this look at the Mars Science Laboratory mission and its rover, Curiosity:
http://www.youtube.com/watch?v"hn2knY6EE&feature"ayer_embedded

(5) On the same night Curiosity lands on Mars, a "Martian Triangle" will appear in sunset skies of Earth. The first-magnitude apparition on August 5th gives space fans something to do while they wait for news from the Red Planet.
http://spaceref.com/astronomy/sciencecasts-mars-landing-sky-show.html

(6) Mars Landing Countdown Clock and dozens of Mars Landing resources can be found at:
+ http://getcurious.com
+ http://www.exploremars.org

+ NASA has made available on YouTube the video they produced on the 40th Anniversary of the Apollo 11 moon landing. It covers the full scope of the Apollo program and features interviews with many of the Apollo astronauts. More information about Apollo can be found when you visit http://www.nasa.gov/apollo
The video can be viewed at:
http://www.youtube.com/watch?feature"ayer_embedded&v"0bFWKR9-0

+ A Raspberry Pi single board computer has been used to send live images from near space. Dave Akerman has used a Raspberry Pi computer board as the flight computer on a High Altitude Balloon and sent back live images from near space at an altitude of almost 40 km. The balloon, called PIE1, was launched from Brightwalton, in Berkshire on July 14, 2012. The images were transmitted on 434.650 MHz (300 bps, 600 Hz shift) in the amateur radio 70cm band using the Slow Scan Digital Video (SSDV) standard. PIE1 reached an altitude of 39,994 metres and images were received as far away as Northern Ireland, over 500km distance, from the 10mW transmitter on 434.650 MHz. The full story and pictures are on Dave

Akerman's website http://www.daveakerman.com/?pY2 (Southgate)

+ The next Hudson Valley Satcom net dates are Thursday, August 2, August 16, and August 30, 8PM EDT (UTC-4 UTC) on the 146.97 MHz MBARC Repeater (PL 100). An echolink connection is available on the N2EYH-L node. More information at: http://www.hvsatcom.org. (Stu, WA2BSS)

+ A 3-Part Video Series, "Introduction to satellite tracking and listening" is available from the Southgate ARC site. This video covers the basics of satellite tracking using the free Orbitron software. See: http://tinyurl.com/3PartSatelliteTrackingVideo

+ Video showing Special Event Station 8J3A operating the amateur radio satellite FO-29 is available at: http://tinyurl.com/8J3AKanham (Southgate)

+ An article on the CQ Magazine Newsroom on-line notes the 10th anniversary of the reviving of AO-7. Launched in 1974 it operated until its batteries short-circuited in 1981. Twenty-one years later, in 2002, the satellite incredibly came back to life. Ten years after returning to the air, AO-7 is still going strong. The article also notes the recent distance records set via AO-7. Read more at: http://www.cqnewsroom.blogspot.com (thanks to CQ Magazine)

+ NASA astronaut Joe Acaba, KE5DAR, will play Disk Jockey in space on Friday, August 3rd. That's when he will do a live remote from the International Space Station as a part of a two-hour music and talk show to be streamed over Internet station Third Rock Radio. Third Rock Radio is calling this outing "The Joe Show." It describes it as a blend of science, technology, engineering and mathematics and art. Third Rock Radio is a project of Houston, Texas radio veterans. It is produced under a NASA Space Act Agreement with RFC Media. The "Joe Show" is mainly aimed at younger Americans. It can be heard as an audio stream at ThirdRockRadio.net with Acaba's appearance beginning at 4 p.m. Eastern time, on Friday, August 3. (via Amateur Radio Newsline Report 1824 ♦ July 27 2012)

+ A new "Phases of the Moon" app for Android (with iOS version promised soon can be downloaded to your phone ($0.99) Examples and screenshots on-line at: http://tinyurl.com/MoonPhasesApp

[ANS thanks everyone for the above information]

/EX

In addition to regular membership, AMSAT offers membership in the President's Club. Members of the President's Club, as sustaining donors to AMSAT Project Funds, will be eligible to receive additional benefits. Application forms are available from the AMSAT

Office.

Primary and secondary school students are eligible for membership at one-half the standard yearly rate. Post-secondary school students enrolled in at least half time status shall be eligible for the student rate for a maximum of 6 post-secondary years in this status. Contact Martha at the AMSAT Office for additional student membership information. And with that, please keep in mind the day a princess potato told her parents, the king and queen potato, about her plans to marry the local television newscaster. The parents were shocked, all they could do was to declare, "But he is not royalty, he is merely a commentator!"

73,
This week's ANS Editor,
JoAnne Maenpaa, K9JKM

109. Weekly Highlights of Solar and Geomagnetic Activity, 23 - 29 July 2012

Newsgroup: rec.radio.amateur.space
Date: 2012-07-30 15:30:13 UTC
From: SWPC.Webmaster@noaa.gov
Message-ID: <20120730153002.1016533C6F@panix2.panix.com>
Source record: 209
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.dx,rec.radio.amateur.space,rec.radio.shortwave,rec.radio.info

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:Product: Weekly Highlights and Forecasts
:Issued: 2012 Jul 30 1421 UTC
# Prepared by the US Dept. of Commerce, NOAA, Space Weather Prediction Center
# Product description and SWPC contact on the Web
# http://www.swpc.noaa.gov/weekly.html
#
# Weekly Highlights and Forecasts
#
Highlights of Solar and Geomagnetic Activity
23 - 29 July 2012

Solar activity was at very low to high levels through the period.
The summary period began at very low to low levels from 23 - 26
July, with multiple low level C-class events observed. An increase
to moderate levels was observed on 27 July, as Region 1532 (S22, L=
183, class/area Fho/510 on 28 July) produced an M2/Sf x-ray event at
1726 UTC. Associated with this event were distinct radio frequency
bursts as well as a Type II (estimated shock speed of 2099 km/s) and
Type IV Radio sweeps, as well as a coronal mass ejection (CME).
After careful analysis, the associated CME was determined to not be
Earth directed. On 28 July, and increase to high levels was observed
as Region 1532 produced an M6/2n x-ray flare at 28/2056 UTC.
Associated with this event were both Type II (estimated shock speed
of 1387 km/s) and Type IV radio sweeps, discrete radio frequency
spikes, and a 370 sfu Tenflare. Imagery supported a CME liftoff with
this event, however due to the location of Region 1532, very little
effects are expected at Earth. On the last day of the forecast
period, 29 July, a return to moderate levels was observed, as Region
1532 produced an M2/1n x-ray event at 29/0622 UTC.

A greater than 10 MeV proton event at geosynchronous orbit began at
23/1545 UTC, reached a maximum flux of 12 pfu at 23/2145 UTC, and
ended at 24/1800 UTC. This event was due to flare activity from old
Region 1520 (S16, L=086) which was almost 40 degrees beyond the west
limb.

The greater than 2 MeV electron flux at geosynchronous orbit was at
high levels from 23 - 28 July. A decrease to moderate levels was
observed on 29 July.

Geomagnetic field activity was at mostly quiet to unsettled levels
throughout the summary period with isolated periods of minor storm
levels observed at high latitudes on 23, 24, and 28 July. Activity
on 23 July was at quiet to unsettled levels with solar wind speeds,
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as measured by the ACE spacecraft, hovering around 450 km/s. On 24 July, solar wind speeds increased to almost 600 km/s, as a coronal hole high speed stream (CH HSS), became geoeffective. With these elevated solar winds, quiet to unsettled levels were observed with an isolated period at minor storm levels observed at high latitudes. As effects of the CH HSS waned, solar wind speeds declined and remained between 380 and 500 km/s for the remainder of the period. With solar wind speeds around nominal levels, mostly quiet to unsettled levels also prevailed through 29 July.

Forecast of Solar and Geomagnetic Activity
30 July - 25 August 2012

Solar activity is expected to be at low to moderate levels from 30 July - 15 August as Region 1532 and old Region 1520 (S16, L=086) rotate across the visible disk. A decrease to mostly low levels is expected from 16 - 23 August. As Region 1532 rotates back onto the visible disk on 23 August, an increase to low to moderate levels is expected for the remainder of the forecast period.

A greater than 10 MeV proton event at geosynchronous orbit is possible from 30 July - 18 August as Region 1532 and old Region 1520 traverse the visible disk.

The greater than 2 MeV electron flux at geosynchronous orbit is expected to be at normal to moderate levels throughout the period since most of the coronal hole structures have dissipated.

Geomagnetic field activity is expected to be at predominantly quiet levels from 30 July - 19 August and 22 - 23 August. Quiet to unsettled levels are expected from 20 - 21 August and 24 - 25 August as weak CH HSS become geoeffective.

110. Crossposting Permitted to rec.radio.amateur.moderated

Newsgroup: rec.radio.amateur.space
Date: 2012-08-01 06:00:03 UTC
From: rram@panix.com
Message-ID: <radio/ham-radio/moderated/crossposting-1-1343800801@panix.com>
Source record: 210
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space,rec.radio.info

```
Posted-By: auto-faq 3.3.2 beta (PGPMoose V2.0, Perl 5.005)
Archive-name: radio/ham-radio/moderated/crossposting
Revision: 1.2 2011/11/02 04:08:53
Posting-Frequency: posted monthly
URL: http://www.panix.com/~rram/usenet/rram/index.html

Changes followed by "|".

After a 30-day public discussion and feedback period to gauge reader
opinions in March of 2009:

http://groups.google.com/group/rec.radio.amateur.moderated/browse_thread/thread/d7d337db35
f23326

the rec.radio.amateur.moderated Moderation Team had decided to consider |
amending its charter, and permit limited simultaneous crossposting to
rec.radio.amateur.moderated and one other unmoderated
amateur-radio-related discussion newsgroup. After a successful trial |
period (90 days, through early July 2009), we decided to adopt this |
change permanently. |

Approved rec.radio.amateur.* newsgroups are those that are currently
listed in the latest version of the "List of Big Eight Newsgroups" which
is crossposted monthly to news.announce.newgroups, news.groups, and
news.lists.misc.

Approved alt.radio.amateur.* and alt.ham-radio.* newsgroups are those
that have been created consistent with the suggestions in "So You Want
to Create an Alt Newsgroup" at:

http://www.faqs.org/faqs/alt-creation-guide/

Approved regional hierarchy newsgroups are those that contain either
"radio.amateur" or "ham-radio" in their names, including
uk.radio.amateur and aus.radio.amateur.misc.

We will make every reasonable effort to keep our list of approved
newsgroups up-to-date. In case we have overlooked any, and a submission
is rejected in error as a result, the rejected submitter can E-mail us
at our administrative contact address (in the signature at the bottom of
this article, and the default Reply-To for the rejection message)
requesting that it be added, and that the article be approved. We may
still choose to reject articles crossposted to any alt.* newsgroup with
an inappropriate name, including obscene language, embedded
name-calling, or encouragement of unlawful conduct.
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Please direct any comments, questions, or criticisms to
rec-radio-amateur-moderated-request@panix.com.

111. Weekly Highlights of Solar and Geomagnetic Activity, 30 July - 05 August 2012

Newsgroup: rec.radio.amateur.space
Date: 2012-08-06 15:30:06 UTC
From: SWPC.Webmaster@noaa.gov
Message-ID: <20120806153002.7386E33C6F@panix2.panix.com>
Source record: 211
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.dx,rec.radio.amateur.space,rec.radio.shortwave,rec.radio.info

```
:Product: Weekly Highlights and Forecasts
:Issued: 2012 Aug 06 0759 UTC
# Prepared by the US Dept. of Commerce, NOAA, Space Weather Prediction Center
# Product description and SWPC contact on the Web
# http://www.swpc.noaa.gov/weekly.html
#
# Weekly Highlights and Forecasts
#
Highlights of Solar and Geomagnetic Activity
30 July - 05 August 2012

Solar activity was at low to moderate levels. The summary period
began at moderate levels due to an M1/Sn flare at 30/1548Z from
Region 1536 (S22, L=173, class/area Eao/100 on 01 August). Later on
30 July, Region 1538 (S22, L=117, class/area Eso/220 on 04 August)
produced a C6 x-ray event with Type II (730 km/s) and Type IV radio
signatures and an associated non-Earth-directed CME. From 31 July
through the remainder of the summary period, solar activity was at
low levels. On 04 August, Region 1539 (S22, L=099, class/area
Cro/030 on 02 August) produced a long duration event (LDE) that
began at 04/1104Z, peaked at 04/1500Z and ended at 04/1649Z.
Associated with this event was an Earth-directed, partial halo CME
with an estimated velocity of 905 km/s. Other activity of note
included an LDE from Region 1535 (N18, L=135, class/area Eai/150 on
01 August). At 31/1130Z, the region produced a C5/Sf with Type II
(880 km/s) and Type IV radio signatures and an associated
non-Earth-directed CME. Later in the day, Region 1536 produced a
C4/Sf at 31/1727Z with a Type II (592 km/s) radio signature. On 02
August, a C1 x-ray event was recorded in the vicinity of old Region
1526 (S17, L=273) which rotated around the west limb on 01 August.
Associated with this event was a non-Earth-directed CME. Region 1539
produced a C2/1f flare at 03/0600Z with a Type II (622 km/s) radio
signature and a non-Earth-directed CME.

A greater than 10 MeV proton enhancement at geosynchronous orbit was
observed late on 02 August through midday on 03 August with a peak
of 1 pfu at 02/1820Z. This enhancement was most likely associated
with the 02 August limb event.

The greater than 2 MeV electron flux at geosynchronous orbit was at
moderate levels throughout the summary period.

Geomagnetic field activity ranged from quiet to minor storm
conditions. The period began at quiet to unsettled levels with
```

isolated active intervals due to a period of sustained southward IMF Bz to -8 nT from about 30/ 0600 - 1800Z. From 31 July to midday on 02 August, quiet levels were observed. At about 02/1000Z, the 28 July CME arrived at the ACE spacecraft producing active to minor storm periods from 02/1200 - 2100Z. During this time frame, IMF Bz was negative multiple times, peaking at about -12 nT at 02/1220Z while solar wind readings indicated a slight increase from near 450 km/s to about 500 km/s. For the remainder of the summary period, quiet to unsettled conditions prevailed.

Forecast of Solar and Geomagnetic Activity
06 August - 01 September 2012

Solar activity is expected to be at low to moderate levels through 14 August as Regions 1539 and 1540 (S27, L=087, class/area Dso/110 on 05 August) rotate off the visible disk. From 15 - 20 August, mostly low levels are expected. A return to low to moderate levels is expected from 21 August - 01 September as Regions 1532 (S20, L=185, class/area Fho/510 on 28 July) and 1536 rotate back onto the visible disk.

A greater than 10 MeV proton event at geosynchronous orbit is possible through 14 August as Regions 1539 and 1540 traverse the visible disk and again from 21 August - 01 September as Regions 1532 and 1536 rotate back onto the visible disk.

The greater than 2 MeV electron flux at geosynchronous orbit is expected to be at normal to moderate levels throughout the period.

Geomagnetic field activity is expected to be at predominately quiet levels from 06 - 07 August. Quiet to unsettled conditions with isolated active intervals are expected on 08 - 09 August due to glancing blow effects from the 04 August CME. Predominately quiet conditions are expected from 10 - 18 August, 21 - 23 August, and 27 August - 01 September. Quiet to unsettled conditions with isolated active intervals are expected from 19 - 20 August and again from 24 - 26 August due to weak coronal hole high-speed stream effects.

112. Radio Meteor Obs. Bull. July 2012 delta Aquarids

Newsgroup: rec.radio.amateur.space
Date: 2012-08-06 17:50:37 UTC
From: Chris Steyaert <observations@rmob.org>
Message-ID: <2u0028ll0qedmti4dd7gbnrf6o7jiprtar@4ax.com>
Source record: 212
Cross-posted to: rec.radio.amateur.space,sci.astro.amateur

Radio Meteor Observation Bulletin No. 228 of July 2012 (88K) is available now as

http://www.rmob.org/rmobtext/rmob1207.txt

More information and the visual presentation of the hourly forward scatter
counts can be found on

http://www.rmob.org

Chris

113. ANS-218 AMSAT News Service Weekly Bulletins

Newsgroup: rec.radio.amateur.space
Date: 2012-08-06 20:51:19 UTC
From: JoAnne Maenpaa <k9jkm@comcast.net>
Message-ID: <002201cd7415$3515f8a0$9f41e9e0$@net>
Source record: 213
Cross-posted to: rec.radio.amateur.space,rec.radio.info

AMSAT NEWS SERVICE
ANS-218

ANS is a free, weekly, news and information service of AMSAT North America, The Radio Amateur Satellite Corporation. ANS reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in designing, building, launching and communicating through analog and digital Amateur Radio satellites.

Please send any amateur satellite news or reports to:
ans-editor@amsat.org

In this edition:
* AMSAT-UK Colloquium 2012
* Russian Satellite RS-40 Yubileiny-2 Launched
* MSU Attracts NASA Attention With Computer System for Spacecraft
* Olympic Station 2o12W Active on the Amateur Radio Satellites
* Kickstarter Fund Raiser for Ham Radio at South Florida Museum
* Mars Rover Landing News From JPL
* Satellite Shorts From All Over
* ARISS Status - 30 July 2012

SB SAT @ AMSAT $ANS-218.01
ANS-218 AMSAT News Service Weekly Bulletins

AMSAT News Service Bulletin 218.01
From AMSAT HQ SILVER SPRING, MD.
August 5, 2012
To All RADIO AMATEURS
BID: $ANS-218.01

AMSAT-UK Colloquium 2012

The AMSAT-UK Colloquium 2012 will be held at the Holiday Inn, Egerton Road, Guildford GU2 7XZ starting at 1000 am on Saturday 15 September, and finishing at approximately 17.00 pm on Sunday 16 September 2012.

The colloquium attracts an international audience from across Europe as well as North America and the Middle East. Attendees range from the builders of the CubeSats and Nanosats, those who communicate through them and beginners who wish to find out more about this fascinating branch of the hobby.

This event provides a rare opportunity to chat with satellite designers and builders, discussions frequently continue until the early hours of the morning.

There will be a beginner's session starting approximately 4pm on Friday 14 September. A Friday Night dinner will be held at the hotel. If you wish to attend, please contact Jim Heck by email at g3wgm@amsat.org at least one week before the event.

A Gala dinner is held on the Saturday evening along with the fund raising auction.

Call for Speakers and Papers

AMSAT-UK invites speakers, to cover topics about micro-satellites, CubeSats, Nanosats, space and associated activities, for this event. They are also invited to submit papers for the "Proceedings" document which will be published at the same time but printed papers are not mandatory. We normally prefer authors to present talks themselves rather than having someone else give them in the authors' absence. We also welcome "unpresented" papers for the Proceedings document.

Submissions should be sent ONLY to David Johnson G4DPZ, via these routes: e-mail: david dot johnson at blackpepper dot co dot uk. Postal address at http://www.qrz.com/db/G4DPZ

Change in Booking Procedures

There is a booking change this year. Do not book your room with the hotel. Instead you need to book your room with AMSAT-UK at the on-line shop: http://shop.amsat.org.uk - the hotel will only hold rooms reserved for AMSAT-UK until August 24. If you book after this date, you risk there not being a room available.

Also, Saturday's Gala Dinner must be booked in advance in the on-line shop.

Additional accommodation package information can be found on the 2012 Colloquium web pages: http://www.uk.amsat.org/colloquium/twelve

[ANS thanks AMSAT-UK for the above information]

Russian Satellite RS-40 Yubileiny-2 Launched

A Russian research satellite, with experiments built by students and research staff of the Siberian State Aerospace University and launched on July 28. Signals from RS-40 on 435.365 MHz were first reported by Maik Hermenau on the AMSAT-DL mailing list.

Jan, PE0SAT published information about RS-40 on his web page. While the new satellite uses amateur 70cm downlinks it does not appear to include an amateur radio mission. Details of the downlink signalling protocol have not been made available.

Yubileiny-2 mission aboard this 65 kilograms satellite includes testing advanced technological solutions to be incorporated into future missions:

+ Contoured heat pipes
+ New technological enhancements for onboard radio equipment.
+ Small-sized attitude control elements including magnetic torquers.
+ Testing optical properties of solar concentrators using an experimental solar panel module.
+ Compact navigation receiver using the GLONASS and GPS technology.

Siberian State Aerospace University student built components and experiments include:

+ Earth sensing technology with a camera observing the earth surface.
+ Small WeB-camera to continuously observe the satellite's deployment mechanisms and monitor the performance of satellite components, structures and instruments made of advanced composite materials.

Jan, PE0SAT reports that the signals he received from RS-40 switch between two downlink frequencies:

+ Signals were first copied on 435.265 MHz FM,
+ Then switched to 435.365 MHz FM.
+ After about six minutes the received waterfall patern changed and there where only signals on 435.365 MHz FM

Jan posted details of the received signals at:
http://www.pe0sat.vgnet.nl/2012/i-received-data-from-rs-40/
He includes 2-line orbital elements as well as audio samples and screenshots of the received signals on this page.

First signal reports from RS-40 are documented at:
http://www.pe0sat.vgnet.nl/2012/first-signals-from-rs-40/

[ANS thanks Jan, PE0SAT for the above information]

MSU Attracts NASA Attention With Computer System for Space

Evelyn Boswell for MSU News Service
Bozeman MT (SPX) Jul 30, 2012
http://tinyurl.com/MSU-Experiment (www.spacemart.com)

Two Montana State University graduate students who are building a radiation-proof computer system for use in space have received an extra boost from NASA. Justin Hogan and Raymond Weber recently learned that their project with faculty member Brock LaMeres was one of 14 selected by NASA for development and demonstration on commercial launch vehicles in 2013 or 2014.

The Montana State University cubesat, William A. Hiscock Radiation Belt Explorer, has been orbiting the Earth since Oct. 28, 2011.

MSU's computer system is designed to lay on top of a reprogrammable hardware fabric, LaMeres said. If the system works the way it's designed, it will detect radiation and high-energy particles. If radiation strikes - or looks like it will strike - an active circuit,

the computer system can shut down the active circuit and use one of the abundant spare circuits. As a result, astronauts may be able to get by with less shielding than they currently carry into space to protect their computers. They should also be able to work without stopping to fix computer malfunctions.

NASA launched a flight test of their computer aboard a rocket on June 21 from Wallops Island. The rocket soared 73 miles above the Atlantic Ocean, exposing the experiments to zero-gravity and the radiation found in 11 miles of space. Within 15 minutes of launch, the rocket splashed down about two miles from Wallops Island. A commercial fishing boat retrieved the experiments and returned them to the students for analysis.

Hogan and Weber are wrapping up their work on their radiation-tolerant, reconfigurable computer system so it will it into a cube approximately four inches on each side. The cube will head to the Columbia Scientific Balloon Facility at Fort Sumner, N.M. to be launched in early September as part of the High Altitude Student Platform (HASP) program through NASA and the Louisiana Space Consortium. The high-altitude balloon is expected to carry the computer system 22 miles above Earth and stay aloft for 15 to 20 hours.

Read the full article at the link above.

[ANS thanks Montana State University and SpaceMart.com for the above information]

Olympic Station 2o12W Active on the Amateur Radio Satellites

Olympic Flagship Special Event Station 2 Oscar 12 Whiskey (2o12W) has been active on the amateur radio satellites working stations in the USA and across Europe.

The 2o12W satellite station has been operated by Ken Eaton, GW1FKY a member of the Barry Amateur Radio Club and AMSAT-UK.

The satellite equipment comprises a Kenwood TS2000 feeding a 5 element dual-band "Elk" antenna mounted on a rotator on the portable cabin about 2.5 meters (8 feet) above the ground.

Ken says the station is located on the promenade and the many electrical amusements in the Fairground generate considerable interference on the VHF/UHF bands which has made reception difficult.

The station 2o12W is planned to be on-the-air until September.

For photos and more information see:
http://www.uk.amsat.org/9322
http://www.2o12w.com/

[ANS thanks AMSAT-UK for the above information]

Kickstarter Fund Raiser for Ham Radio at South Florida Museum

The West Palm Beach Amateur Radio Group has built and operates a permanent Amateur Radio exhibit at the South Florida Science Mu seum in West Palm Beach Florida.

Both the Museum and the amateur radio group are non-profit entities. The museum gave the space for the exhibit but everything from the carpet on the floor, the paint on the walls, the overhead lighting, the electrical wiring and up has been donated and supplied by club members and limited supporters.

Presently the amateur radio facilities are on the very modest side. They operate on loaned radios and wire antennas. The club says, "We get hundreds of youngsters visiting our exhibit every week, only a handful get to experience that 'Lasting Moment of First Excitement' due to our limited facilities."

The club has started an on-line pledge drive using Kickstarter to mmet their goal of more modern radio and put up a tower next to the building with an antenna on it that will be high enough to get over the substation next door.

They also need to add exhibits that explain how basic radio, elec- tronics and antennas work for building the level of excitement.

Visit the West Palm Beach Amateur Radio Group's "Lasting Moment of First Excitement" Kickstarter Project page at: http://www.kickstarter.com/projects/997251641/lasting-moments-of-first-excit ement

The club web pages are at: http://www.wpbarc.com - and - Facebook page at www.facebook.com/WestPalmBeachAmateurRadioGroupInc

[ANS thanks Tom Loughney, AJ4XM for the above information]

Mars Rover Landing News From JPL

If you have an iPad or an iPhone with a camera, here's a chance to create personalized photos with a high-resolution 3D model of the Curiosity rover.

Download Spacecraft 3D from the Apple Apps Store. It's free! (Android version to be out in a few weeks).

Print a couple of copies of the paper "Targets" before landing night.

Place the Target where you want the rover to appear.

Compose the desired photo, then tap the "Gear" icon and press the Photo button to take snapshots of the rovers with old and new friends on landing night.

Send your pictures to: jplpublic@jpl.nasa.gov We'll put together a collection of photos after the landing.

Other free Curiosity software to play with:

Xbox - Mars Rover Landing

Try your own skills on landing Curiosity through this Xbox game

Downloadable through the Xbox menu system or at:
http://marketplace.xbox.com/en-US/Product/Mars-Rover-Landing/66acd000-77fe-1000-9115-d80258480836

Eyes on the Solar System: Curiosity Edition

Experience Curiosity as it lands at Gale Crater
http://eyes.jpl.nasa.gov(viewable in any web browser)

Be A Martian Mobile Phone Apps - Mars on the go!
Participate as a Citizen Scientist on the Mars Science Lab mission
iPhone: http://mars.jpl.nasa.gov/mobile/beam/iphone/
Android:http://mars.jpl.nasa.gov/mobile/beam/android/
Windows: http://mars.jpl.nasa.gov/mobile/beam/windowsphone/

Explore Mars on the Web!
This 3D interactive experience lets you explore Mars with Curiosity
Curiosity's Journey: http://mars.jpl.nasa.gov/explore/curiosity
Free Drive: http://mars.jpl.nasa.gov/explore/freedrive/
Gale Crater: http://mars.jpl.nasa.gov/explore/galecrater/
Learn the Rover: http://mars.jpl.nasa.gov/explore/learnaboutrover/

[ANS thanks Jan, WB6VRN, for the above information]

Satellite Shorts From All Over

+ Congratulations to Ted Doty, AA5CK on earning his Satellite Worked All States Award #332. Ted wrote, "I want to express my thanks and appreciation to all of our great Satellite Ops, working from home and portable, to make this award and others a possibility.

+ Remembering this week, that August 2, 1971 was the date when the Apollo 15 lunar module Falcon left the Moon in first televised lunar liftoff: http://en.wikipedia.org/wiki/Apollo_Lunar_Module#Media includes videos.

+ An English language NHK TV news story covers the amateur radio CubeSat FITSAT-1 (NIWAKA) which launched to the International Space Station (ISS) on July 21: http://tinyurl.com/FitsatOnNHK (Southgate)

+ Listen for Nikolai, VE3NKL operating portable from Newfoundland on a vacation trip. He will be on SO-50 and AO-27 time permitting. He is active in grid squares GN09 and GN19. He posts details on his callsign lookup web page at QRZ.com. (via K4FEG)

+ Listen for Norm, N3YKF operating satellites with a portable station he brought with him during his vacation in Peru.

[ANS thanks everyone for the above information]

ARISS Status - 30 July 2012

1. Upcoming School Contact

Space Jam 6, which will be held at the Octave Chanute Aerospace Museum in Rantoul, Illinois, comleted an Amateur Radio on the International Space Station (ARISS) contact on Sunday, August 5 at 10:06 UTC.

The Space Jamboree Workshop is the Midwest's largest technology oriented gathering of Boy Scouts and Girl Scouts. The theme this year is "The History of Aviation." Subjects that will be taught and merit badges that may be earned include the following: Space Exploration, Radio, Aviation, Electronics, Robotics, Soil/Water Conservation, Environmental Science, Energy, Metalwork, Computers, Geology, Nuclear Science, Engineering and Inventing. The Jamboree is working with the University of Illinois, Purdue, and DePauw Universities (high altitude balloon launches, FIRST Robotics, Nuclear Engineering) to help Scouts plan for the future.

2. Girls from WE@RIT Camp Speak with Sunita Williams in Space

Fifth and sixth grade girls attending the "Everyday Engineering" camp at Kate Gleason College, sponsored by the Women in Engineering @ Rochester Institute of Technology (WE@RIT) in New York took part in an Amateur Radio on the International Space Station (ARISS) contact on Monday, July 23. The girls talked with on-orbit astronaut Sunita Williams, KD5PLB who currently holds the record for longest space flight by a woman. The contact highlighted camp activities that focus on engineering-based themes to teach the engineering design process through hands-on build and design activities. This year's camp theme is "World in Motion." Also attending the contact were students from the grade 7-9 camp (held two weeks ago), the students attending this week's RoboCamp, and the Lil' Kids on Campus Space Week kids. To view video of the contact, see:
http://www.youtube.com/watch?v=bdlpcw_VD4M

3. Virginia Air and Space Center Contact Successful

On Thursday, July 26, Sunita Williams, KD5PLB held an Amateur Radio on the International Space Station (ARISS) contact with youth volunteers from the Virginia Air and Space Center in Hampton, Virginia. The volunteers give tours, provide demonstrations to the public and support the center in its efforts to educate the public. The center has its own amateur radio exhibit and during these summer months, it also welcomes NASA exhibits Destination Station, the Orion Test Vehicle and the Mars Science Laboratory.

[ANS thanks Carol, KB3LKI, for the above information]

/EX

In addition to regular membership, AMSAT offers membership in the President's Club. Members of the President's Club, as sustaining donors to AMSAT Project Funds, will be eligible to receive additional benefits. Application forms are available from the AMSAT Office.

Primary and secondary school students are eligible for membership at one-half the standard yearly rate. Post-secondary school students enrolled in at least half time status shall be eligible for the student rate for a maximum of 6 post-secondary years in this status. Contact Martha at the AMSAT Office for additional student membership information.

73,
This week's ANS Editor,
Lee McLamb, KU4OS

114. flow control

Newsgroup: rec.radio.amateur.space
Date: 2012-08-07 09:40:50 UTC
From: sergio@tiscali.net
Message-ID: <252260434@aioe.org>
Source record: 214

Hello,

maybe this link might be of use http://www.artpainters.net when evaluating
the line
;-)

115. get kelp

Newsgroup: rec.radio.amateur.space
Date: 2012-08-10 00:16:26 UTC
From: mark morgan <konstans@hotmail.com>
Message-ID: <k01jqkeut1@adenine.netfront.net>
Source record: 215

sergio@tiscali.net wrote:
> Hello,
>
> maybe this link might be of use http://www.artpa
can the spam

--- Posted via news://freenews.netfront.net/ - Complaints to news@netfront.net ---

116. ANS-225 AMSAT News Service Weekly Bulletins

Newsgroup: rec.radio.amateur.space
Date: 2012-08-12 01:06:42 UTC
From: JoAnne Maenpaa <k9jkm@comcast.net>
Message-ID: <001901cd7826$b7c8c150$275a43f0$@net>
Source record: 216
Cross-posted to: rec.radio.amateur.space,rec.radio.info

AMSAT NEWS SERVICE
ANS-225

ANS is a free, weekly, news and information service of AMSAT North America, The Radio Amateur Satellite Corporation. ANS reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in designing, building, launching and communicating through analog and digital Amateur Radio satellites.

Please send any amateur satellite news or reports to:
ans-editor at amsat.org

In this edition:

* Return Your AMSAT-NA Board of Directors Ballots by September 15
* Hotel Information for the 2012 AMSAT Symposium in Orlando
* Dr. Mark Hammond N8MH to speak at Space Colloquium
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* Postponed ELaNa Launch From Vandenberg Scheduled for August 14
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* Raytheon Building the New Space Fence Radar
* There's an App For That - ID Visible Satellite Flyovers
* Satellite Shorts From All Over

SB SAT @ AMSAT $ANS-225.01
ANS-225 AMSAT News Service Weekly Bulletins

AMSAT News Service Bulletin 225.01
>From AMSAT HQ SILVER SPRING, MD.
August 12, 2012
To All RADIO AMATEURS
BID: $ANS-225.01

Return Your AMSAT-NA Board of Directors Ballots by September 15

AMSAT Corporate Secretary, Alan Biddle, WA4SCA said, "By now, all members in good standing of AMSAT-NA should have received their ballots, including the position biographies by the candidates. We have a full slate of candidates this year. Remember, this is one of your best opportunities to make your views on the path of our organization known."

Additional information for those interested can be found in the minutes of the 2011 Board Meeting which appear in the current issue of the AMSAT Journal.

Select no more than three of the six listed candidates (in alphabetical order):

+ Tom Clark, K3IO
+ Steve Coy, K8UD
+ Mark Hammond, N8MH
+ Lou McFadin, W5DID
+ Gould Smith, WA4SXM
+ Patrick E. Stoddard, WD9EWK

The 3 candidates receiving the most votes will become directors serving 2 year terms. The 2 receiving the next highest number of votes will be seated as alternates for 1 year terms.

You must mail your ballot back to be received at the AMSAT-NA Office no later than the close of business on September 15, 2012:

AMSAT
850 Sligo Avenue, #600
Silver Spring, MD 20910

[ANS thanks AMSAT Corporate Secretary, Alan Biddle, WA4SCA for the above information]

Hotel Information for the 2012 AMSAT Symposium in Orlando

The 2012 AMSAT Space Symposium and Annual Meeting will be held in Orlando, Florida on October 26 - 28, 2012. Information about the Symposium is posted as it becomes available at:
http://www.amsat.org/amsat-new/symposium/2012/index.php

The Symposium Hotel is the Holiday Inn at Orlando-International Airport is located one mile from the Orlando International Airport (MCO). The AMSAT discount rate is $99 + taxes per night. The reservation block code used when calling the hotel directly is AMT.

The hotel telephone number is 407-851-6400. The Symposium Committee recommends you make reservations by calling the hotel directly rather than through the Web. Cutoff date for reservations is Oct 6, 2012. The direct link to the hotel web page is:
http://www.holidayinn.com/hotels/us/en/orlando/mcoap/hoteldetail

The hotel offers free Internet connection and free airport shuttle. When you arrive at the Orlando Airport call 407-709-5310 to request the shuttle.

The Orlando International Airport (MCO) is the closest to the Symposium and is served by most major air carriers. The hotel address is:
5750 T.G. Lee Blvd • Orlando, FL 32822. A map link is included on

the hotel web page.

Watch for announcement from the Symposium Committee soon about the opening of registration. The cost of the Symposium is:

+ Symposium Registration including Proceedings
o Through September 23, 2012: $ 45.00
o Starting September 24, 2012: $ 50.00
o At the Door: $ 55.00

+ Saturday Evening Banquet $ 45.00

+ Sunday Morning Area Coordinators' Breakfast $ 15.00

+ Monday (Oct 29) bus trip to KSC and entrance ticket $ 100.00

[ANS thanks the 2012 Symposium Committee for the above information]

Dr. Mark Hammond N8MH to speak at Space Colloquium

The 27th AMSAT-UK International Space Colloquium will be held on the weekend of 15-16 September at the Holiday Inn Hotel, Guildford, GU2 7XZ, England close to the University of Surrey.

The full presentation schedule is being finalized and will be published shortly but, in the meantime we can confirm that it will be a truly international event. Among the many notable speakers will be Dr. Mark Hammond, N8MH from North Carolina. Mark is AMSAT-VP for Educational Relations and will be giving two presentations.

The first will include updates on significant AMSAT-NA developments, including information about activities related to International Traffic in Arms Regulations (ITAR) matters. He will also provide a general and technical update about the Fox family of CubeSats.

The second presentation will address the challenges presented by the current trend of justifying satellite construction and launches through STEM (Science, Technology, Engineering and Math) education. Specific hurdles faced by radio amateur satellite organizations will be highlighted. Progress made by AMSAT-NA through educational partnerships with the ARRL, NASA, and ARISS will be discussed.

The weekend event is open to all. It attracts an international audience that ranges from those involved in building and operating Amateur Radio satellites to beginners who wish to find out more about this fascinating branch of the hobby.

Tour Feature: SSTL Kepler Building

Colloquium attendees will have an opportunity to visit the satellite facilities in the new Surrey Satellite Technology Limited (SSTL) Kepler Building. The tour will include exclusive access to inspect the new SSTL clean room and integration facilities at the recently

opened Kepler Building. If you have visited their previous facilities at the university campus, during previous Colloquia, you will be amazed by what is happening now.

There will be presentations by experts from AMSAT-SA, AMSAT-NA and AMSAT-DL on their current spacecraft projects. Also planned are Cube-Sat presentations on UKube-1, Strand-1 and, of course the FUNcube-1 project. We will be including an exclusive roundup of a number of new live and potential spacecraft projects that are under investigation and/or development. Additionally a number of presentations are planned covering new communications techniques and similar futuristic topics.

You'll be able to participate all the usual networking opportunities, the gala dinner and auction/raffle, plus the opportunity to operate the sophisticated groundstation in the GB4FUN mobile demonstration module.

All accommodation will be at the Holiday Inn hotel. Please note that the hotel will only hold our reserved rooms until 3 weeks prior to the event, ie until August 24. If you book after this date, you risk there not being a room available. Bookings for Fri/Sun nights, or ones made after this date cannot be guaranteed. Rooms and Saturday's Gala Dinner must be booked in advance in the AMSAT-UK shop.
For booking see: http://www.uk.amsat.org/colloquium/twelve

AMSAT-UK posted an article at: http://www.uk.amsat.org/9388
This page also contains the links which will allow you to find registration information for the Colloquium.

[ANS thanks AMSAT-UK for the above information]

Successful ARISS Contacts With Scouting Space Jam 6

Scouts attending Space Jam 6, which was held at the Octave Chanute Aerospace Museum in Rantoul, Illinois, participated in an ARISS contact with ISS astronaut Akihiko Hoshide, KE5DNI on Sunday, August 5. Hoshide was able to answer 22 space-related questions posed by the scouts before losing the radio connection. Space Jam focused on "The History of Aviation" this year and offered lessons on Space Exploration, Radio, Aviation, Electronics and Robotics among other STEM topics. Approximately 1000 scouts, leaders and parents turned out for Space Jam 6 this year.

Ken Holland, KC9TTR recorded the downlink from the contact and posted the audio at: http://www.youtube.com/watch?v=13COaiGaQ

[ANS thanks the Amateur Radio on the International Space Station (ARISS) Status Report by Carol Jackson, KB3LKI for the above information]

Postponed ELaNa Launch From Vandenberg Scheduled for August 14

The August 2, 2012 Atlas V rocket launch with a combination of 11 satellites from Vandenberg Air Force Base in California for the US Government and NASA ELaNa university cubesats was scrubbed due to a range instrumentation problem. This launch is now scheduled to lift off from Vandenberg on August 14.

The primary mission will launch a pair of US Navy Ocean Surveillance Satellites (NOSS). These satellites carry equipment to track ships and aircraft by triangulation of radio transmissions. The two NOSS satellites have a combined weight of 6500 kg. They will separate a few days after being placed into a 1100 km circular orbit at 63° inclination.

This is the first Atlas V launch with modified helium tanks in the Centaur upper stage. The change has created room in the aft skirt to accommodate 8 P-POD dispensers for cubesats. This launch carries 11 cubesats, to be released into 470 x 770 km, 63° orbit about 3 hours

after launch and following maneuvers by the Centaur upper stage.

The ELaNa Cubesats aboard are:
+ CINEMA (Cubesat for Ion, Neutral, Electron, Magnetic fields)
o Downlinks for engineering telemetry and command are in the 2400-2450 MHz range; Science telemetry is in 2200-2300 MHz range.

+ CSSWE (Colorado Student Space Weather Experiment)
o Downlink 437.345 MHz, 9k6 with AX25

+ CP5 (PolySat)
o Downlink 437.405 MHz at 1 watt, AFSK on LSB AX.25 over NRZI at 1200 baud, every 2 minutes, begins 3.5 hours after first turn-on.

+ CXBN (Cosmic X-Ray Background Nanosatellite)
o Downlink 437.525 MHz, GFSK, AX.25

The US Government Satellites aboard are:
+ Aeneas
o First cubesat to deploy 2.4 GHz Dish Antenna. WIFI transmitter will transmit on 2425.0 MHz with 1 watt of output power.
o Downlink 437.600 MHz AX25 1200 bps beacon every 10 seconds and spread spectrum two-way link elsewhere in the 70cm band.
+ ORSES (ORS Enabler Satellite)
+ Horus
+ Re
+ Aerocube 4A, 4B, 4C

Please refer to the prior bulletin for mission summaries and satellite team web pages: http://amsat.org/pipermail/ans/2012/000637.html

A detailed article of the launch can be found on-line at:
http://www.americaspace.org/?p#568

[ANS thanks NASA, the CubeSat Teams noted above, AMSAT-UK, and Gunter's Space Page for the above information]

ESA Announces New Educational Cubesat Initiative

AMSAT-UK has received notice that the European Space Agency's Education Office is inviting the CubeSat community to send their notifications of interest for a new initiative involving the development of educational picosatellites and the provision of deployers and launch services. The call closes on 7 September 2012.

Following the successful launch of seven CubeSats on Vega's maiden flight in early 2012, ESA has decided to pursue further educational CubeSat-related activities.

In order to gather valuable information that will help better define the terms of its initiative, ESA's Education and Knowledge Management Office needs to get an overview of the level of interest both from educational CubeSat developers and from commercial suppliers that are eligible to participate in the programme.

Call 1: Educational CubeSat development

This call for Notification of Interest is open to institutions from ESA Member States and Cooperating States which intend to develop CubeSats for educational purposes.

Teams interested in participating are invited to send their Notification of Interest to cubesats@esa.int

The email subject should be: "CubeSat opportunity – Name of the proposed CubeSat project" and should be sent before 12:00 CEST 7 September 2012.

Further information at:
http://www.esa.int/SPECIALS/Education/SEMRLXSX55H_0.html

ESA – Towards a new educational CubeSat initiative
http://www.uk.amsat.org/9515

[ANS thanks AMSAT-UK for the above information]

Welcome to Gale Crater - Mars Science Laboratory Curiosity Lands

With Curiosity now safely on the surface of the Red Planet after its August 6 entry, descent and landing in Gale Crater, NASA's Mars Science Laboratory began its planned primary one-Martian-year (98-week) mission of discovery and exploration.

Re-live the entry, descent and landing at Jet Propulsion Labs:
http://www.youtube.com/watch?feature&#65533;ayer_embedded&v&#65533;ZY2JuuhZA

The Curiosity Mars Descent Imager (MARDI) captured the rover's descent to the surface. The instrument shot 4 frame per second video from heat shield separation to the arrival on the ground. The last few seconds show the dust being kicked up as the flying skycrane approached the surface:
http://www.youtube.com/watch?feature&#65533;ayer_embedded&v&#65533;GMDXy-Y1I

Watch the arrival on Mars in an exciting movie trailer format:
http://www.universetoday.com/96646/curiositys-awesome-landing-trailer/

This week the rover checked its health and determined its location, orientation and tilt on the surface of Mars. All initial spacecraft activities appear to have been completely nominal. The JPL control team next commenced with firing all of Curiosity's pyrotechnic devices for releasing post-landing deployments.

Spring-loaded deployments, such as removal of dust covers from the Hazard-Avoidance cameras (Hazcams) occurred shortly after landing enabling Curiosity to acquire images with its front and rear Hazcams.

Additional post-landing checkout activity included testing of the UHF telecommunications system and rover motor controller assembly. Approximately five megabytes of data were successfully relayed back to Earth from NASA's Mars Odyssey spacecraft during the first day.

Curiosity landed facing east-southeast within Gale Crater, with a heading of 112.7 degrees (plus or minus five degrees), and a few degrees of tilt.

The latest official mission information, photos, and video is always posted at: http://www.jpl.nasa.gov/msl/ - and -
http://solarsystem.nasa.gov/news/msl_landing.cfm

Finally, Curiosity Rover vehicle tires have tread patterns that imprint the acronym JPL in Morse Code in the dusty soil of the Mars surface. See the report on the ARRL web at:
http://tinyurl.com/MorseOnMars (www.arrl.org)

[ANS thanks NASA and JPL for the above information]

Pioneer of Radio Astronomy Sir Bernard Lovell Dies

The BBC reports pioneering astronomer and physicist Sir Bernard Lovell has died aged 98. He was the founder of University of Manchester's Jodrell Bank Observatory. Jodrell Bank is dominated by the iconic 76m (249ft) Lovell Radio Telescope, was completed in 1957. he telescope and his other contributions to radio astronomy led to him being knighted in 1961. He continued to come in to work at the Observatory until quite recently when ill health intervened.

The structure remains the third largest steerable telescope in the world and plays a key role in global research on pulsating stars, testing extreme physics theories including Einstein's general theory of relativity.

The BBC posted the news at:
http://www.bbc.co.uk/news/uk-england-19164236

[ANS thanks the BBC for the above information]

Raytheon Building the New Space Fence Radar

The Air Force expects to deploy its $3.5 billion space fence system by 2017 to improve its space debris tracking ten-fold. As many as 200,000 pieces of orbital debris can be tracked with the S-band radars.

Lockheed Martin competed with Raytheon for the contract mandating a scalable, solid-state S-band radar with a wavelength frequency capable of detecting objects far smaller than the half-century-old Air Force Surveillance System the new system will replace.

Lockheed Martin demonstrates their prototype space fence in a video:
http://www.youtube.com/watch?v=JdN90vT04&feature=player_embedded

Raytheon won the contract which they describe as multiphase acquisition program, leading to the delivery of up to three, globally positioned, S-band radars operating in the U.S. Space Surveillance Network. Raytheon posted information on-line at:
http://tinyurl.com/RaytheonSpaceFence (raytheon.com)

Amateurs can listen to meteor pings detected by the present generation of the Air Force Space Surveillance Radar in Texas at:
http://spaceweatherradio.com/

[ANS thanks CNET, Raytheon, and Lockheed Martin for the above information]

There's an App For That - ID Visible Satellite Flyovers

WhatSat - Satellite Explorer helps you identify and learn about satellites that you see passing overhead in the night sky. It can also be used as a satellite spotting aid. The satellite catalog includes 150 or so of the brightest orbiting objects as identified by NORAD. For each satellite listed there is a description and an image (when available).

The first mode of operation allows you display a list of currently visible satellites if you see one passing overhead. The app shows you a ground track of the satellite to give you some idea where and how far away it actually is.

The second mode of operation gives you a list of what is visible with a visibility indicator, azimuth, and elevation to help you find satellites. This includes a map view of the ground tracks.

WhatSat requires cell service or WiFi to access the server that does satellite flyby calculations.

Read more information at:
https://play.google.com/store/apps/details?id=m.finchconsulting.whats
at

Editor's Note: This is not an AMSAT-NA product but is mentioned due to its applicability and potential interest to our readers with no endorsement implied.

[ANS thanks SpaceWeather.com for the above information]

Satellite Shorts From All Over

+ The AMSAT-NA On-line Store at http://store.amsat.org/ will be re-opening on August 13, 2012.

+ A QSL card is now available for AubieSat-1 / AO-71 reception. Operators desiring a confirmation of receipt for AO-71 are invited to send their signal reports to:

Dr. J-M Wersinger, KI4YAU
Allison Laboratories Room 210
Auburn University, AL 36849

Please note the date and time of receipt on your request (or your QSL card), as well as any other pertinent receiving information or conditions. Copies of the content of the CW signals you copied are requested, but not required. Any other questions regarding AubieSat-1 may be emailed to: jm.wersinger <at> gmail.com

+ JPL Infographics, a newly launched website and resource database from NASA's Jet Propulsion Laboratory, is inviting space aficionados and graphic wizards to take on a visual challenge by grabbing NASA data and transforming them into a scientific work of art. The website provides extensive collections of NASA science and mission data, graphics and space images that members of the public can download and use to create their own infographics - creative illustrations of complex data. Users can then upload their infographics, have them reviewed by JPL experts, and share their creations in a public gallery on the JPL website:
http://www.jpl.nasa.gov/infographics/

+ KP2, U.S. Virgin Islands has been reported to be active on the linear satellites. (On the Birds!). Wyatt, AC0RA, reports that he made a QSO on August 2nd with Rich, KP2CT, from St. Thomas on FO-29 for his first satellite contact. Rich will initially focus on operating via FO-29.

+ Listen for Jerry Brown, K5OE using his UK call M0GOE as he operates on the FM satellites during a family holiday next week from IO82 and IO81/82 border (Sunday thru Thursday), and IO72 (Wednesday, 15 Aug 2012, 1400z - 1630z). If he can get to the border between IO71/72 he will try that, but there might not be enough time. Nova Scotia, Quebec, and W1/2/3 should be in range to the west.

+ Jeff, KB2M says all the requested 13 Colonies special event QSL cards for his satellite operations from K2I (NJ), and K2E (DE) are in the mail. If anyone else who worked us wants a card please send a SASE to KB2M, at his address listed at QRZ.com.

+ New Stunning ISS Time-lapse: Earth Illuminated shows aurora, lightning, our Milky Way Galaxy, city lights and other sights as seen from orbit:
http://www.youtube.com/watch?v=UfMq-b0Uo&feature=player_embedded

+ The Sloan Digital Sky Survey III (SDSS-III) has released the largest three-dimensional map of massive galaxies and distant black holes ever created, and it pinpoints the locations and distances of over a million galaxies. It covers a total volume equivalent to that of a cube four billion light-years on a side. A video released with the map takes viewers on an animated flight through the Universe as seen by SDSS. There are close to 400,000 galaxies in the animation:
http://www.youtube.com/watch?feature=player_embedded&v=LBItePDZw

+ AMSAT Commemorative Shirt for the 2012 Symposium is only available by mail order. If you have not received a copy of the order form you can download and print a copy from the the link on the front page at: http://www.amsat.org. The deadline for receiving your mail order is September 21, 2012.

+ The next Hudson Valley Satcom net dates are Thursday, August 16, August 30, 8 PM EDT (UTC-4 UTC) on the 146.97 MHz MBARC Repeater (PL 100). An echolink connection is available on the N2EYH-L node. More information at: http://www.hvsatcom.org. (Stu, WA2BSS)

+ The Carpcomm Space Communication Network invites amateur satellite operators to participate and share cubesat information. Read more of their mission at: http://carpcomm.com/

+ Tom W5KUB says the webcasts on http://w5kub.com from the Huntsville Hamfest will go live Friday morning August 17 for the drive from Memphis to Huntsville. The Huntsville hamfest is August 18-19 with internet webcast streaming for the entire event.

[ANS thanks everyone for the above information]

/EX

In addition to regular membership, AMSAT offers membership in the President's Club. Members of the President's Club, as sustaining donors to AMSAT Project Funds, will be eligible to receive additional benefits. Application forms are available from the AMSAT Office.

Primary and secondary school students are eligible for membership at one-half the standard yearly rate. Post-secondary school students enrolled in at least half time status shall be eligible for the student rate for a maximum of 6 post-secondary years in this status. Contact Martha at the AMSAT Office for additional student membership information. And with that, please keep in mind like Earth, Mars has four seasons because the planet tilts on its axis. The seasons vary in length because of Mars' eccentric orbit around the sun. In the northern hemisphere, spring is the longest season at seven months. Summer and fall are both about six months long. Winter is only four months long. On average, the temperature on Mars is about minus 80 degrees F (minus 60 degrees C). In winter, near the poles temperatures can get down to minus 195 degrees F (minus 125 degrees C). A summer day on Mars may get up to 70 degrees F (20 degrees C) near the equator, but at night the temperature can plummet to about minus 100 degrees F (minus 73 C).

73,
This week's ANS Editor,
JoAnne Maenpaa, K9JKM

117. Weekly Highlights of Solar and Geomagnetic Activity, 06 - 12 August 2012

Newsgroup: rec.radio.amateur.space
Date: 2012-08-13 15:30:07 UTC
From: SWPC.Webmaster@noaa.gov
Message-ID: <20120813153002.2A8E733C6F@panix2.panix.com>
Source record: 217
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.dx,rec.radio.amateur.space,rec.radio.shortwave,rec.radio.info

```
:Product: Weekly Highlights and Forecasts
:Issued: 2012 Aug 13 0759 UTC
# Prepared by the US Dept. of Commerce, NOAA, Space Weather Prediction Center
# Product description and SWPC contact on the Web
# http://www.swpc.noaa.gov/weekly.html
#
# Weekly Highlights and Forecasts
#
Highlights of Solar and Geomagnetic Activity
06 - 12 August 2012

Solar activity was at very low to moderate levels. The summary
period began at moderate levels due to an M1 x-ray event at 06/0438
UTC from Region 1542 (S14, L=030, class/area 190/Dai on 09 August).
Associated with this event were both Type II (estimated shock speed
of 552 km/s) and Type IV radio sweeps and a non-Earth-directed CME.
Activity levels decreased to low from 07 - 10 August with only
low-level C-class solar flares observed. On 11 August, an increase
to moderate levels was observed as Region 1540 (S27, L=087,
class/area 110/Dso on 05 August) produced a long duration M1/2n
flare at 11/1220 UTC. The CME associated with this event was
determined to not be Earth directed. A return to very low levels was
observed on 12 August.

No proton events were observed at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit was at
normal levels during most of the period.

Geomagnetic field activity was at quiet to active levels.
Predominantly quiet to unsettled levels prevailed from 06 - 09
August as solar winds speeds, as measured by the ACE spacecraft,
varied from 275 - 450 km/s. An isolated active period was observed
during 08/0000 - 0300 UTC in response to slightly elevated solar
wind speeds and extended periods of negative IMF Bz. Field activity
decreased to predominantly quiet levels during 10 - 12 August.

Forecast of Solar and Geomagnetic Activity
13 August - 08 September 2012

Solar activity is expected to be at predominantly low levels from 13
- 21 August. An increase to low to moderate levels is expected from
22 August - 05 September as an active sunspot region complex returns
to the visible disk. A return to low levels is expected from 06 - 08
September.
```

No proton events are expected at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit is expected to be at normal to moderate levels through 15 August. An increase to moderate to high flux levels is expected during 16 - 24 August. Normal to moderate flux levels are expected during 25 August - 08 September.

Geomagnetic field activity is expected to be at predominantly quiet levels during 15 - 18 August, 21 - 23 August, and 27 August - 08 September. Quiet to unsettled levels are expected during 13 - 14 August, 19 - 20 August, and 24 - 26 August due to recurrent coronal hole high-speed streams.

118. Why US needs to fund NASA

Newsgroup: rec.radio.amateur.space
Date: 2012-08-14 13:26:54 UTC
From: Samarth Mahajan <samrules9@gmail.com>
Message-ID: <32311bf0-334e-4dea-8fae-5fed3775e9f4@m10g2000pby.googlegroups.com>
Source record: 218

Hey everyone!

Being a space enthusiast you must be wanting US to invest more in
NASA. For that reason only we've submitted a design for one propaganda
competition which can be found here :

https://www.facebook.com/photo.php?fbid=355464011194888&set=a.353934151347874.82545.302069
013201055&type=1&relevant_count=1
:

By liking/sharing this you will be helping NASA. So please click on
the photo's link and do the necessary to see a brighter space age in
the future.

Regards,
Samarth Mahajan

119. Crossposting Permitted to rec.radio.amateur.moderated

Newsgroup: rec.radio.amateur.space
Date: 2012-08-15 06:00:03 UTC
From: rram@panix.com
Message-ID: <radio/ham-radio/moderated/crossposting-1-1345010401@panix.com>
Source record: 219
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space,rec.radio.info

```
Posted-By: auto-faq 3.3.2 beta (PGPMoose V2.0, Perl 5.005)
Archive-name: radio/ham-radio/moderated/crossposting
Revision: 1.2 2011/11/02 04:08:53
Posting-Frequency: posted twice monthly
URL: http://www.panix.com/~rram/usenet/rram/index.html

Changes followed by "|".

After a 30-day public discussion and feedback period to gauge reader
opinions in March of 2009:

http://groups.google.com/group/rec.radio.amateur.moderated/browse_thread/thread/d7d337db35
f23326

the rec.radio.amateur.moderated Moderation Team had decided to consider |
amending its charter, and permit limited simultaneous crossposting to
rec.radio.amateur.moderated and one other unmoderated
amateur-radio-related discussion newsgroup. After a successful trial |
period (90 days, through early July 2009), we decided to adopt this |
change permanently. |

Approved rec.radio.amateur.* newsgroups are those that are currently
listed in the latest version of the "List of Big Eight Newsgroups" which
is crossposted monthly to news.announce.newgroups, news.groups, and
news.lists.misc.

Approved alt.radio.amateur.* and alt.ham-radio.* newsgroups are those
that have been created consistent with the suggestions in "So You Want
to Create an Alt Newsgroup" at:

http://www.faqs.org/faqs/alt-creation-guide/

Approved regional hierarchy newsgroups are those that contain either
"radio.amateur" or "ham-radio" in their names, including
uk.radio.amateur and aus.radio.amateur.misc.

We will make every reasonable effort to keep our list of approved
newsgroups up-to-date. In case we have overlooked any, and a submission
is rejected in error as a result, the rejected submitter can E-mail us
at our administrative contact address (in the signature at the bottom of
this article, and the default Reply-To for the rejection message)
requesting that it be added, and that the article be approved. We may
still choose to reject articles crossposted to any alt.* newsgroup with
an inappropriate name, including obscene language, embedded
name-calling, or encouragement of unlawful conduct.
```

Please direct any comments, questions, or criticisms to
rec-radio-amateur-moderated-request@panix.com.

120. Weekly Highlights of Solar and Geomagnetic Activity, 13 - 19 August 2012

Newsgroup: rec.radio.amateur.space
Date: 2012-08-20 15:30:09 UTC
From: SWPC.Webmaster@noaa.gov
Message-ID: <20120820153001.E17F333C7E@panix2.panix.com>
Source record: 220
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.dx,rec.radio.amateur.space,rec.radio.shortwave,rec.radio.info

```
:Product: Weekly Highlights and Forecasts
:Issued: 2012 Aug 20 0630 UTC
# Prepared by the US Dept. of Commerce, NOAA, Space Weather Prediction Center
# Product description and SWPC contact on the Web
# http://www.swpc.noaa.gov/weekly.html
#
# Weekly Highlights and Forecasts
#
Highlights of Solar and Geomagnetic Activity
13 - 19 August 2012

Solar activity has been at very low to high levels. Two active
sunspot regions dominated the summary period. Region 1543 (N21,
L=21, class/area Hhx/360 on 16 August) was the most active region
from 13-16 August, producing multiple C-class solar flares. Many of
these events were associated with discrete radio frequency bursts,
Type II and Type IV radio sweeps, suggesting CME liftoff. Due to the
location of Region 1543, many of the CME&rsquo;s were Earth-directed
but very little effects were forecast upon arrival at Earth. Region
1543 decayed from a beta-gamma to a simple beta group during the
summary period. On 17 August, from around the east limb, multiple
M-class solar flares were observed, including an M2.4 x-ray event at
17/1319 UTC as well as an M1 x-ray event at 17/1720 UTC. On18
August, five more M-class solar flares were observed, the largest
being an M5/Sf x-ray flare at 18/0102 UTC with an associated 120 sfu
Tenflare. As the day progressed, Region 1548 (N20, L=232, class/area
Cso/120 on 18 August) was numbered and determined to be the active
region responsible for all of the M-class events. From 16-18 August,
multiple CME&rsquo;s were observed in LASCO C2 imagery, all appeared
to originate from Region 1548. Due to the location around the east
limb, none of these CME&rsquo;s were forecast to arrive at Earth.

No proton events were observed at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit was at
normal to moderate levels during the period

Geomagnetic field activity was at predominantly quiet to active
levels throughout the summary period. Quiet to unsettled levels
prevailed from 13-16 August as solar wind speeds, as measured by the
ACE spacecraft, remained at nominal background levels. An increase
to quiet to unsettled levels with isolated active periods were
observed from 17-19 August. Weak CME effects were observed on 17
August and late on 18 August, measurements from the ACE spacecraft
```

indicated a solar sector boundary (SSB) crossing. Following the SSB, coronal hole effects were observed on 19 August with solar wind speeds, increasing from below 400 km/s to almost 600 km/s

Forecast of Solar and Geomagnetic Activity
20 August - 15 September 2012

Solar activity is expected to be at low levels with a slight chance for more M-class events from 20-31 August as Region 1548 continues to evolve and rotate across the disk. A return to predominantly low levels is expected to prevail from 01-15 September.

No proton events are expected at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit is expected to be normal levels from 20-21 August. An increase to high flux levels is expected from 22-26 August. A return to normal - background levels is expected to prevail for the remainder of the period.

Geomagnetic field activity is expected to be at mostly quiet levels with a few brief periods of quiet to unsettled levels due to recurrent coronal hole high speed stream effects. From 20 - 22 August, 25-25 August, 08-09 September, and 15 September quiet to unsettled levels are expected. For the remainder of the forecast period, mostly quiet levels are expected to prevail.

121. ANS-232 AMSAT News Service Weekly Bulletins

Newsgroup: rec.radio.amateur.space
Date: 2012-08-23 15:50:03 UTC
From: JoAnne Maenpaa <k9jkm@comcast.net>
Message-ID: <002501cd8146$f26b6230$d7422690$@net>
Source record: 221
Cross-posted to: rec.radio.amateur.space,rec.radio.info

AMSAT NEWS SERVICE
ANS-232

ANS is a free, weekly, news and information service of AMSAT North America,
The
Radio Amateur Satellite Corporation. ANS reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in
designing, building, launching and communicating through analog and digital
Amateur Radio satellites.

Please send any amateur satellite news or reports to:

ans-editor@amsat.org

In this edition:
* NASA Announcement of the Next CubeSat Launch Initiative
* National Scouting Museum Announces JOTA Contest for ISS Contact
* VQ9JC Activates Diego Garcia on Satellites
* AMSAT at the ARRL New England Convention
* Satellite Shorts From All Over
* ARISS Status - 13 August 2012

SB SAT @ AMSAT $ANS-232.01
ANS-232 AMSAT News Service Weekly Bulletins

AMSAT News Service Bulletin 232.01
From AMSAT HQ SILVER SPRING, MD.
August 19, 2012
To All RADIO AMATEURS
BID: $ANS-232.01

NASA Announcement of the Next CubeSat Launch Initiative

On February 14, 2012 NASA announced that the AMSAT-NA Fox-1 Cube-sat was selected as one of 33 small satellites to fly as auxiliary payloads aboard rockets planned to launch in 2013 and 2014 during their third round of CubeSat Space Mission Candidates.

NASA released the next Announcement of Cubesat Launch Initia-tive document on August 10, 2012. The CubeSat Launch initiative (CSLI) provides opportunities for small satellite payloads to fly on rockets planned for upcoming launches. These CubeSats are flown as auxiliary payloads on previously planned missions. The NASA

document can be accessed on-line at:

http://tinyurl.com/NASA-CubeSat-Initiative-PDF (www.nasa.gov).

Electronic Proposals may be received until the close date on November 12, 2012 at 4:30 P.M. EST via email to jason.c.crusan@nasa.gov.

Proposed CubeSat investigations must be consistent with NASA's Strategic Plan and the NASA education vision and goals. The research must address aspects of science, exploration, technology development, education or operations.

NASA will enter into a collaborative agreement with the selected Cubesat development teams to provide integration and other services as necessary to complete the launch activity. CubeSat developers are responsible for the development cost of their satellite.

The CubeSat Launch Initiative is open to NASA centers, U.S. not-for-profit organizations, and accredited U.S. educational organizations. Participation in the CubeSat Launch Initiative will be contingent upon selection by NASA and negotiation of an appropriate Agreement between NASA and the Collaborator.

More information of the NASA CubeSat Launch initiative (CSLI) can be accessed on the web at:
http://www.nasa.gov/directorates/heo/home/CubeSats_initiative.html

[ANS thanks Jason Crusan at NASA for the above information]

National Scouting Museum Announces JOTA Contest for ISS Contact

On October 20, 2012, the National Scouting Museum in Irving, Texas (a suburb of Dallas) will contact an astronaut on the International Space Station via amateur radio, during the 55th Jamboree On-The-Air (JOTA).

The National Scouting Museum says they expect as many as 25 participants will be selected in a competition to speak via amateur radio with an astronaut in space. The competition is open to all currently registered Cub Scouts, Boy Scouts, Varsity Scouts, Sea Scouts, and Venturers who submit the following:

1) Answer the following question: Why should we continue space exploration? in 100 words or less.

2) Indicate if you have any experience with amateur radio or STEM (science, technology, engineering, math) subjects, as well as if you have earned the Astronomy academic belt loop and pin for Cub Scouts, the Space Exploration and/or the Astronomy merit badges, and any other special interests and training related to amateur radio, STEM, or space.

Scouts must send their response by e-mail to nsmuseum@scouting.org before 11:59 p.m., Friday, September 15, 2012 for their chance to be selected to participate in this once-in-a-lifetime opportunity.

Scouts who enter should be capable of getting to Irving, Texas for JOTA but that should mean most of Texas, Oklahoma, western Louisiana, and Arkansas.

[ANS thanks Tom Schuessler, N5HYP, Scout Radio Coordinator, Irving Amateur Radio Club for the above information]

VQ9JC Activates Diego Garcia on Satellites

A news item in the Ohio/Penn DX Bulletin No. 1074, dated August 13, 2012, reports Jim Clary, VQ9JC/ND9M, is back on Diego Garcia until mid-November, 2012. Jim operates through the LEO satellites with an FT-857 (TX) and FT-817 (RX) for duplex comms. His satellite antenna is a 5-element Elk log periodic.

The ham shack building on Diego Garcia is closed for maintenance. Jim operates Field Day style from two recreational parks on the island. His HF antennas are hung from trees and he needs to bring all of his amateur radio gear with him including the radio, power supply, antennas, power and coax cables, keyer, laptop, and tools) with him in two backpacks. Jim's HF rig is an FT-897D (barefoot at 100W) and single-band dipoles. Most operating will be on CW, with SSB on occasion. Since his two operating spots are outside in public areas, Jim has to set up the station and then break it down each day, which further limits his operating time to 1230-1615z on most days. QSL via ND9M.

All VQ9JC HF operating is from the island, so contacts are valid for DXCC and other awards. Satellite operating is from both the island as well as the ship Jim works on. All QSOs made from the ship will be clearly identified as '/MM' or 'maritime mobile', and the QSLs will indicate that as well.

On his return voyage home from Diego Garcia to the United States last year Jim operated shipboard providing maritime mobile satellite contacts from rare ocean grids. No information is available yet about his return voyage plans for this trip.

[ANS thanks Ohio/Penn DX Bulletin No. 1074 for the above information]

AMSAT at the ARRL New England Convention

AMSAT will be at the ARRL New England Convention 24-26 August 2012. The convention will be held at Holiday Inn in Boxborough, Massachusetts. Ernie
Bauer, N1AEW, is leading the booth manning
efforts. A forum session will also be

held from 1000 to noon on Saturday, 25 August,
which will include talks by AMSAT
President Barry Baines, WD4ASW and VP Engineering Tony Monterio, AA2TX.

[ANS thanks Ernie, N1AEW, for the above informaion]

Satellite Shorts From All Over

+ Check out the "Eclectic Technology" column on page 44 of the August
2012 QST Magazine, by Steve Ford, WB8IMY for an article about the
Fox-1 satellite (and brief mention of AMSAT's accomplishments in
developing small satellites.

+ Some may wish to investigate the free Ham Radio Toolbar for your
web browser by John, G0DPC at: http://www.haminfobar.co.uk/ John
says he provides a completely free download, with no hidden catches.

+ You can see the images sent back from Japan's HORYU-2 amateur sat-
ellite at: http://www.uk.amsat.org/9548 This link also provides
latest mission information and telemetry capture/decoding tools.
The satellite's callsign is JG6YBW and it transmits on 437.375 MHz.

+ In a 20 minute video Korean artist Hojun Song and Donghee Park des-
cribes the Open Source Satellite Initiative amateur radio CubeSat
OSSI-1. This satellite plans to launch on a Soyuz-2-1b rocket from
the Baikonur launch facility in Kazakhstan along with the Bion-M1
and Dove-2 satellites in December, 2012 with an orbit of 575 km by
290 km and 64.9 degrees inclination. It has a beacon in the 145 MHz
band and a data communications transceiver in the 435 MHz band.
Also aboard is a 44 watt LED array to flash Morse Code messages to
observers on Earth. Watch at: http://www.uk.amsat.org/9600

+ This video report will update you with the Mars post-landing check
out and preparations for the rover mission:

https://www.youtube.com/watch?feature&#65533;ayer_embedded&v&#65533;odK2g6aok
And, get a personal perspective of the mission from Mark Rober, one
of Curiosity's 3000 developers:

http://www.youtube.com/watch?feature&#65533;ayer_embedded&v&#65533;KogFDM3Zg

[ANS thanks everyone for the above information]

ARISS Status - 13 August 2012

1. Missed Contact with Canada Science and Technology Museum

Canada Science and Technology Museum Summer Day Camps had been scheduled
for
an
ARISS contact on Thursday, August 9 via station IK1SLD in Italy. The

contact
was unsuccessful. ARISS is investigating the reason for the failure.

2. Expedition 30/31 Scheduled for Debrief

Astronauts Don Pettit and Andr&#65533; Kuipers (Expedition 30/31) will take
part in
an
ISS Ham debrief session to give feedback on the ARISS program. The
debrief
is
scheduled for August 15.

[ANS thanks Carol, KB3LKI, for the above information]

/EX

In addition to regular membership, AMSAT offers membership in the
President's Club. Members of the President's Club, as sustaining
donors to AMSAT Project Funds, will be eligible to receive additional
benefits. Application forms are available from the AMSAT Office.

Primary and secondary school students are eligible for membership
at one-half the standard yearly rate. Post-secondary school students
enrolled in at least half time status shall be eligible for the student
rate
for a maximum of 6 post-secondary years in this status.
Contact Martha at the AMSAT Office for additional student membership
information.

73,
This week's ANS Editor,
Lee McLamb, KU4OS

122. WSR-233 AMSAT Weekly Satellite Report

Newsgroup: rec.radio.amateur.space
Date: 2012-08-23 15:53:28 UTC
From: JoAnne Maenpaa <k9jkm@comcast.net>
Message-ID: <002401cd8146$b327b470$19771d50$@net>
Source record: 222
Cross-posted to: rec.radio.amateur.space,rec.radio.info

```
This report is organized into three (3) parts.
Part 1 (S1) - operational analog amateur satellites
Part 2 (S2) - operational digital amateur satellites
Part 3 (S3) - non - operational satellites

SB SAT @ AMSAT W8ISS $WSR-233.S1
WSR 233 Part 1 08/21/2012

AMSAT NEWS SERVICE BULLETIN 233.S1
FROM AMSAT HQ SILVER SPRING, MD, August 21, 2012
TO ALL RADIO AMATEURS
BID: $WSR-233.S1

PW-Sat
Catalog Number: 38083 (?)
Launch Date: Febrauary 13, 2012
Launch Site: Kourou, French Guiana

Status: On Orbit

Uplink: 435.020 MHz FM
Downlink: 145.900 MHz DSB

Beacon:

Callsign:

URL:

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=132
[07162012]
=====
DO-64 Delfi-C3
Catalog number: 32789
Launch Date: April 28, 2008 0354z
Launch site: Satish Dhawan Space Centre, India

Status: Operational
Current Mode: Science Mode - Beacon ONLY

Telemetry: 145.870 MHz

Downlink: 145.880 to 145.920 MHz
Uplink: 435.530 to 435.570 MHz

Delfi-C3 web page: http://www.delfic3.nl/
```

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=68
[02092011]
=====
VO-52 HAMSAT
Catalog number: 28650
Launch Date: May 05, 2005 0444z
Launch site: Satish Dhawan Space Centre, India

Status: Operational
Current Mode: U/v - Dutch Transponder

Frequencies:
Indian Transponder:
Uplink: 435.220 to 435.280 MHz LSB/CW
Downlink: 145.930 to 145.870 MHz USB/CW

Dutch Transponder:
Uplink: 435.225 to 435.275 MHz LSB/CW
Downlink: 145.925 to 145.875 MHz USB/CW

Indian Beacon: 145.9360 MHZ CW
Dutch Beacon: 145.860 MHz 12WPM with CW message

Mode and Antenna Polarization:
V: LHCP
U: RHCP

Official Webpage: http://www.amsatindia.org/hamsat.htm

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=30

To know what transponder is switched on please listen for the beacon
that is active. Each transponder has a different beacon.
[03232012]
=====
SO-50 SAUDISAT-1C
Catalog number: 27607
Launch date: December 20, 2002 1700z
Launch site: Baikonur, Kazakhstan

Status: Operational

Current Mode: V/u

Uplink: 145.850 MHz FM - 67.0 Hz PL tone
Downlink: 436.795 MHz

Mode and Antenna Polarization:
V: Linear
U: Linear

Official Webpage: http://saudisat.kacst.edu.sa/index.shtml
(not up and running currently)

To switch the transmitter on, you need to send a CTCSS tone of 74.4
Hz. The order of operation is thus: (allow for Doppler as necessary):
1) Transmit on 145.850 MHz with a tone of 74.4 Hz to arm the 10 minute
timer on board the spacecraft.
2) Now transmit on 145.850 MHz (FM Voice) using 67.0 Hz to PT the re-
peater on and off within the 10 Minute window.
3) Sending the 74.4 tone again within the 10 minute window will reset
the 10 minute timer.
[02092011]
=====
FO-29 JAS-2
Catalog number: 24278
Launch Date: August 17, 1996

Status: Operational
Current Mode: V/u (Mode JA)

Voice/CW (Mode JA)
Uplink: 145.90 to 146.00 MHz CW/LSB
Downlink: 435.80 to 435.90 MHz CW/USB
Beacon: 435.795 MHz

Digital Mode JD
Uplinks: 145.850 MHz FM
145.870 MHz FM
145.910 MHz FM
Downlink: 435.910 MHz 1200-baud BPSK or 9600-baud FSK
Callsign: 8J1JCS
Digitalker: 435.910 MHz

Mode and Antenna Polarization:
V: RHCP
U: RHCP

For current operational schedule for FO-29:
http://www.ne.jp/asahi/m-arai/gkz/satinfo/fo29e.htm

JARL English webpage:
http://www.jarl.or.jp/English/5_Fuji/ejasmenu.htm

AMSAT-NA Webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID
=5&retURL=/satellites/status.php

Mineo Wakita, JE9PEL, has created a simple decoder program for FO29's
CW telemetry downlink: http://www.ne.jp/asahi/hamradio/je9pel/
fo29cwts.htm
[01122012]
=====
AO-27 AMRAD
Catalog number: 22825
Launch date: September 26, 1993 0140z
Launch site: Kourou, French Guiana

Status: Operational

Current Mode: V/u

Uplink: 145.850 MHz FM
Downlink: 436.797 MHz FM

Mode and Antenna Polarization:
V: Linear
U: Linear

Official Webpage: http://www.ao27.org
[02092011]
=====
AO-7 AMSAT OSCAR 7
Catalog number: 07530
Launch Date: November 15, 1974
Launch site: Vandenberg AFB, California, USA

Status: Operational

Current Mode: Alternating between Mode A and B every 24 hours

Uplink: 145.850 to 145.950 MHz CW/USB Mode A
432.125 to 432.175 MHz CW/LSB Mode B
Downlink: 29.400 to 29.500 MHz CW/USB Mode A (1W PEP)
145.975 to 145.925 MHz CW/USB Mode B (8W PEP)
145.975 to 145.925 MHz CW/USB Mode C (2W PEP)
Beacons: 29.502 MHz CW
145.972 MHz CW
435.100 MHz CW
2304.100 MHz CW

Official Webpage:
http://www.amsat.org/amsat-new/satellites/sat_summary/ao7.php
[04242012]
=====
INTERNATIONAL SPACE STATION (ISS) - ARISS
Catalog number: 25544
Launch date: November 20, 1998 0640z (ZARYA module)
Launch sites: Baikonur, Kazakhstan
Kourou, French Guiana
Uchinoura Space Center, Japan
Kennedy Space Center, Titusville, Florida, USA

Status: Operational

Current Active Modes: FM Repeater - OFF
Voice - V/v
BBS - OFF
2m APRS - OFF
70cm APRS - ON
70cm Digi - ON
SSTV - OFF

Expedition 32 Crew (July 2012 - November 2012):
Commander: Gennady Padalka RN3DT
Flight Engineer: Joe Acaba KE5DAR
Flight Engineer: Sergei Revin RN3BS
Flight Engineer: Sunita Williams KD5PLB
Flight Engineer: Yuri Malenchenko RK3DUP
Flight Engineer: Akihiko Hoshide KE5DNI

Available Modes and Frequencies:
Digital/APRS:
Worldwide 2m packet uplink: 145.825 MHz FM 1k2
Worldwide 2m packet downlink: 145.825 Mhz FM 1k2
Worldwide 70cm packet uplink: 437.550 Mhz FM 1k2
Worldwide 70cm packet downlink: 437.550 Mhz FM 1k2

Voice:
Region 1 voice uplink: 145.200 MHz FM
Region 2/3 voice uplink: 144.490 MHz FM
Worldwide downlink: 145.800 MHz FM

Crossband Repeater:
Repeater Uplinks: 1269.650 MHz FM
437.800 MHz FM
145.990 MHz FM - 67.0 PL (Kenwood)
Repeater Downlink: 145.800 MHz FM
437.800 MHz FM (Kenwood)

SSTV Robot 36:
Downlink: 145.800 MHz FM

Mode and Antenna Polarization:
V: Linear
U: Linear

Callsigns:
Belgian: OR4ISS
German: DP0ISS
Russian: RS0ISS
RZ3DZR
United States: NA1SS
2m Packet Mailbox: RS0ISS-11
2m Digipeater alias: ARISS
70cm Packet Mailbox: RS0ISS-1
70cm Digipeater callsign: RS0ISS
70cm Digipeater alias: ARISS

Official ARISS Webpage: http://www.rac.ca/ariss
ISS Fan Club Webpage: http://www.issfanclub.com
APRS tracking page: http://www.ariss.net/

ISS Daily Crew Schedule: http://spaceflight.nasa.gov/station/timelines
Remember that the crew operates on UTC time. Also, all of the time
line is NOT translated from Russian and posted.
[08062012]

NNNN
/EX

SB SAT @ AMSAT W8ISS $WSR-233.S2
WSR 233 Part 2 08/21/2012

AMSAT NEWS SERVICE BULLETIN 233.S2
FROM AMSAT HQ SILVER SPRING, MD, August 21, 2012
TO ALL RADIO AMATEURS
BID: $WSR-233.S2

RS-40 MiR (Yubileiny-2)
Catalog Number: 38733
Launch Date: July 28, 2012

Status: On Orbit

Uplink:
Downlink(s): 435.265 MHz
435.365 MHz

Beacon:

Callsign:

URL:
[07302012]
=====
HORYU-II
Catalog number: 38340
Launch Date: May 17, 2012

Status: On Orbit

Uplink: 145.??? MHz
Downlink: 437.375 MHz CW/AX25/FSK

Beacon: 437.375 MHz CW

Callsign: JG6YBW

URL:

IARU Coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=216
[05282012]
=====
XaTcobeo
Catalog Number: 38082
Launch Date: Febrauary 13, 2012
Launch Site: Kourou, French Guiana

Status: Operational

Uplink:
Downlink: 437.365 MHz FFSK with AX.25

Beacon:

Callsign:

URL:

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=135
[03162012]
=====
UniCubeSat
Catalog Number:
Launch Date: Febrauary 13, 2012
Launch Site: Kourou, French Guiana

Status: Operational

Uplink:
Downlink: 437.305 MHz 9k6 bps FSK

Beacon:

Callsign:

URL:

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=133
[03162012]
=====
Robusta
Catalog Number:
Launch Date: Febrauary 13, 2012
Launch Site: Kourou, French Guiana

Status: On Orbit

Uplink:
Downlink: 437.325 MHz 1k2 FM telemetry (data every 1 min, 20 sec. burst)

Beacon:

Callsign:

URL:

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=122
[02142012]
=====
MO-72 MaSat-1
Catalog Number: 38081
Launch Date: Febrauary 13, 2012

Launch Site: Kourou, French Guiana

Status: Operational

Uplink:
Downlink: 437.345 MHz GFSK 625/1250 bps
437.345 MHz CW

Beacon:

Callsign:

URL:

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=126
[03232012]
=====
Goliat
Catalog Number: 38085
Launch Date: Febrauary 13, 2012
Launch Site: Kourou, French Guiana

Status: Operational

Uplink:
Downlink: 437.485 MHz 1k2 AFSK

Beacon:

Callsign:

URL:

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=98
[03162012]
=====
E-St@r
Catalog Number: 38079
Launch Date: Febrauary 13, 2012
Launch Site: Kourou, French Guiana

Status: On Orbit

Uplink:
Downlink: 437.445 MHz 1k2 bps AFSK

Beacon:

Callsign:

URL:

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=130

[07302012]
=====
ALMASat-1
Catalog Number: 38078
Launch Date: Febrauary 13, 2012
Launch Site: Kourou, French Guiana

Status: On Orbit

Uplink:
Downlink: 437.465 MHz 1k2 bps FSK
2407.850 MHz

Beacon:

Callsign:

URL:

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=39
[02212012]
=====
RS-39 Chibis-M
Catalog Number: 38051
Launch Date: October 30, 2011 10:11:00 UTC
Launch site: Tyuratam (Baikonur Cosmodrome), Kazakhstan

Status: Operational

Uplink:
Downlink:

Beacon: 435.315 MHz CW
435.215 MHz CW

Callsign:

URL:

IARU coordination status page:
[07302012]
=====
JUGNU
Catalog Number: 37839
Launch Date: October 12, 2011 05:30:00 UTC
Launch site: Satish Dhawan Space Centre, India

Status: On Orbit

Uplink: 145.??? MHz 1k2 (mode?)
Downlink: 437.505 MHz 9k6 (mode?)

Beacon: 437.275 MHz 15 wpm (?) CW

Callsign:

URL: http://www.iitk.ac.in/me/jugnu/index.htm

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=160
[07092012]
=====
SRMSAT
Catalog Number: 37841
Launch Date: October 12, 2011 05:30:00 UTC
Launch site: Satish Dhawan Space Centre, India

Status: On Orbit

Uplink: 145.900 MHz 1k AX.25 (speed?)
Downlink: 437.500 MHz 2k4 AX.25

Beacon: 437.425 MHz 12 wpm CW

Callsign:

URL: http://srmsat.in/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=181
[07092012]
=====
HRBE (E1P Explorer 1 [Prime] CubeSat (E1P-U2))
Catalog Number: 37855
Launch Date: October 28, 2011
Launch site: Vandenberg Air Force Base, California, USA

Status: On Orbit

Uplink: 437.305 MHz (???)
Downlink: 437.505 MHz AX.25 (SSB?)

Beacon:

Callsign:

URL: http://ssel.montana.edu/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=116
[01122012]
=====
M-Cubed
Catalog Number: 37855
Launch Date: October 28, 2011
Launch site: Vandenberg Air Force Base, California, USA

Status: On Orbit

Uplink:
Downlink: 437.485 MHz AX.25

Beacon:

Callsign:

URL: http://umcubed.org/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=215
[01122012]
=====
RAX-2
Catalog Number: 37853
Launch Date: October 28, 2011
Launch site: Vandenberg Air Force Base, California, USA

Status: Operational

Uplink:
Downlink: 437.345MHz 9k6 GMSK

Beacon:

Callsign:

URL: http://rax.engin.umich.edu//

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=221
[03232012]
=====
AO-71 AubieSat-1
Catalog Number: 37854
Launch Date: October 28, 2011
Launch site: Vandenberg Air Force Base, California, USA

Status: On Orbit

Uplink:
Downlink: 437.475 MHz 1k2 AX.25

Beacon: 437.475 MHz CW

Callsign: KI4NQO

URL: http://www.space.auburn.edu/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=148
[12262011]
=====
O/OREOS
Catalog Number: 37224
Launch Date: November 20, 2010

Launch site: Kodiak Launch Complex, Alaska, USA

Status: On Orbit

Uplink:
Downlink: 437.035 MHZ AX.25

Beacon:

Callsign:

URL: http://www.ooreos.org/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=146
[02092011]
=====
Rax-1 Radio Aurora Explorer
Catalog Number: 37223
Launch Date: November 20, 2010
Launch site: Kodiak Launch Complex, Alaska, USA

Status: On Orbit

Uplink:
Downlink: 437.505 MHz 9k6 GMSK

Beacon:

Callsign: RAX-1

URL: http://rax.engin.umich.edu/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=165
[02092011]
=====
FO-69 Fastrac-1 Sara Lily
Catalog Number: 37227
Launch Date: November 20, 2010
Launch site: Kodiak Launch Complex, Alaska, USA

Status: Operational

Uplink 1: 145.980 MHz 1k2 baud
Uplink 2: 145.825 MHz 1k2 baud
Downlink: 437.345 MHz 1k2 and 9k6 baud

Beacon: 437.435 MHz 1k2 AX.25

Callsign: Fast1

URL: http://fastrac.ae.utexas.edu/index.php

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=83

[07052011]
=====
FO-70 Fastrac-2 Emma
Catalog Number: 37380
Launch Date: November 20, 2010
Launch site: Kodiak Launch Complex, Alaska, USA

Status: Operational

Uplink 1: 435.025 MHz 1k2 baud
Uplink 2: 437.435 MHz 9k6 baud
Downlink: 145.825 MHz 1k2 and 9k6 baud

Beacon: 145.825 MHz 1k2 AX.25

Callsign: Fast2

URL: http://fastrac.ae.utexas.edu/index.php

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=84
[12162011]
=====
StudSat
Catalog Number: 36796
Launch Date: July 12, 2010 0352z
Launch site: Satish Dhawan Space Centre, India

Status: On Orbit

Uplink: 437.505MHz, 9600bps FSK
Downlink: 437.505MHz, 9600bps FSK
Beacon : 437.505MHz, 20bps ASK

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=164
[02092011]
=====
TIsat-1
Catalog Number: 36799
Launch Date: July 12, 2010 0352z
Launch site: Satish Dhawan Space Centre, India

Status: On orbit

Callsign: HB9DE

Uplink: 145.980MHz FM, AFSK
Downlink: 437.305MHz FM, AFSK
Beacon: 437.305MHz CW

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=118
[02092011]

=====
SwissCube
Catalog Number: 35932
Launch Date: September 23, 2009 0621z
Launch site: Satish Dhawan Space Centre, India

Status: Operational

Callsign: HB9EG

Beacon(100mw): 437.5050MHz CW
Beacon(1w): 437.5050MHz FSK 1k2bps

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=109
[02092011]
=====
UWE-2
Catalog Number: 35934
Launch Date: September 23, 2009 0621z
Launch site: Satish Dhawan Space Centre, India

Status: In Orbit

Beacon(500mw): 437.3850 MHz AFSK 1k2bps
437.3850 MHz FSK 9k6bps

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=110
[02092011]
=====
ITUpsAT1
Catalog Number: 35935
Launch Date: September 23, 2009 0621z
Launch site: Satish Dhawan Space Centre, India

Status: Operational

Beacon(100mw): 437.325MHz CW
Beacon(1w): 437.325MHz 19k2bps

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=113
[02092011]
=====
BEESAT
Catalog Number: 35933
Launch Date: September 23, 2009 0621z
Launch site: Satish Dhawan Space Centre, India

Status: Operational

Callsign: DP0BEE

Beacon(100mw): 436.000MHz CW
Beacon(500mw): 436.000MHz GMSK 4k8bps
Beacon(500mw): 436.000MHz GMSK 9k6bp
[02092011]
=====
CP-6
Catalog Number: 35003
Launch Date: May 19, 2009 2355z
Launch site: Wallops Island, Virginia, USA

Status: Operational

Downlink: 437.365 MHz 1k2 AFSK

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=121
[07302012]
=====
HAWKSAT 1
Catalog number: 35004
Launch Date: May 19, 2009 2355z
Launch site: Wallops Island, Virginia, USA

Status: operational

Downlink: 437.345 MHz ?

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=105
[07302012]
=====
Pharmasat
Catalog Number: 35002
Launch Date: May 19, 2009 2355z
Launch site: Wallops Island, Virginia, USA

Status: Operational

Downlink: 437.465 MHz 1k2 AFSK

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=94
[02092011]
=====
ANUSAT
Catalog Number: 34808
Launch Date: April 20, 2009 0115z
Launch Site: Satish Dhawan Space Centre, India

Status: ?

Downlink: 435.000 MHz
Uplink: 145.800 MHz

Telemetry: 137.400 MHz
[02092011]
=====
SOHLA-1 (ASTRO TECH.)
Catalog Number: 33496
Launch Date: January 23, 2009 0354z
Launch site: Tanegashima Space Center, Japan

Status: Operational

Proposed Frequencies and Modes:
Downlink: 437.505 MHz AFSK/CW
Beacon: 437.505 MHz AFSK/CW

Callsign:

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=101
[02092011]
=====
KAGAYAKI (Solan Co.)
Catalog Number: 33495
Launch Date: January 23, 2009 0354z
Launch site: Tanegashima Space Center, Japan

Status: In Orbit

Downlink: 437.375 MHZ FSK9k6/CW
Beacon: 437.375 MHz FSK9k6/CW

IARU coordination status page:

AMSAT-NA webpage:

[02092011]
=====
STARS (Kagawa Univ.) (Twin Satellites)
Catalog Number: 33498
Launch Date: January 23, 2009 0354z
Launch site: Tanegashima Space Center, Japan

Status: Operational ?

Downlinks: 437.485 MHz FM/CW
437.465 MHz FM/CW
Beacons: 437.305 MHz FM/CW
437.275 MHz FM/CW

Callsigns: JR5YBN
JR5YBO

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=99

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID=121&retURL

=/satellites/status.php
[02092011]
=====
KKS-1 (Tokyo MCIT)
Catalog Number: 33499
Launch Date: January 23, 2009 0354z
Launch site: Tanegashima Space Center, Japan

Status: Operational

Downlink: 437.455 MHz AFSK/CW
Beacon: 437.385 MHz AFSK/CW

Callsign: JQ1YYY

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=107

AMSAT-NA webapge:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID=120&retURL
=/satellites/status.php
[20092011]
=====
PRISM (Tokyo Univ.)
Catalog Number: 33493
Launch Date: January 23, 2009 0354z
Launch site: Tanegashima Space Center, Japan

Status: Operational ?

Downlink: 437.425 MHz AFSK/GMSK/CW
Beacon: 437.250 MHz AFSK/GMSK/CW

Callsign: JQ1YCX

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=97

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID=119&retURL
=/satellites/status.php
[02092011]
=====
RS-30 Radio Sputnik 30 (Yubileiny)
Catalog Number: 32953
Launch Date: May 23, 2008 1520z
Launch site: Plesetsk Missile and Space Complex, Russia

Status: Operational

Curent Modes: Telemetry
Audio
Images

Downlinks: 435.315 MHz
435.215 MHz

AMSAT-NA website:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID=115&ret
URL=/satellites/status.php

Official website:
http://www.npopm.com/?cid=leoca&caid=43
[02092011]
=====
CanX-2
Catalog number: 32790
Launch Date: April 28, 2008 0354z
Launch site: Satish Dhawan Space Centre, India

Status: Operational in range of ground station only

Downlink: 437.478 MHz GFSK

For the latest project status update please visit the Can X-2 web
page: http://www.utias-sfl.net/nanosatellites/CanX2/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=46
[02092011]
=====
AAUSAT-II
Catalog number: 32788
Launch Date: April 28, 2008 0354z
Launch site: Satish Dhawan Space Centre, India

Status: Operational

Downlink: 437.425 MHz 1k2 baud packet

For the latest project status update please visit the AAUSAT-II web
page:
http://www.aausatii.aau.dk/homepage/index.php?language=en&page=home

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=60
[02092011]
=====
CO-65 CUTE-1.7+APD II
Catalog number: 32785
Launch Date: April 28, 2008 0354z
Launch site: Satish Dhawan Space Centre, India

Status: Operational

Downlink: 437.475 MHz 9k6 Packet
Uplink: 1267.600 Mhz

Telemetry Beacon:
Downlink: 437.2750 MHz CW

For the latest project status update please visit the Cute-1.7+APD II
web page: http://lss.mes.titech.ac.jp/ssp/cute1.7/index_e.html

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=78

Command Station blog website:
http://lss.mes.titech.ac.jp/ssp/cute1.7/blog/

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID=112&retURL
=/satellites/status.php
[03232012]
=====
Compass-1
Catalog number: 32787
Launch Date: April 28, 2008 0354z
Launch site: Satish Dhawan Space Centre, India

Status: Operational

Current Mode: dependant on last received command

Uplink: 145.980 MHz FM
Downlink: 437.275 Mhz CW
437.405 MHz Packet

For the latest project status update please visit the Compass 1 web
page: http://www.raumfahrt.fh-aachen.de/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=52

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID=114&retURL
=/satellites/status.php
[06162011]
=====
CO-66 Seeds II
Catalog number: 32791
Launch Date: April 28, 2008 0354z
Launch site: Satish Dhawan Space Centre, India

Status: Operational

Downlink: 437.485 MHz

Callsign: JQ1YGU

For the latest project status update please visit the Seeds 2 web
page: http://cubesat.aero.cst.nihon-u.ac.jp/english/seeds_2_e.html

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=36

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID=113&retURL
=/satellites/status.php
[073092011]
=====
CAPE-1
Catalog Number: 31130
Launch Date: April 17,2007 0702z
Launch site: Baikonur, Kazakhstan

Status: Intermittent

Current Mode: /u

TLM Downlink: 435.245 MHz 9600 bs FSK AX.25
CW Beacon: 435.245 MHz CW

Callsign: K5USL

TLM and CW interchange every 30 seconds.

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID=94&retURL=
/satellites/status.php

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=72
[02092011]
=====
CP3
Catalog Number: 31129
Launch Date: April 17,2007 0702z
Launch site: Baikonur, Kazakhstan

Status: Operational

Current Mode: /u

Downlink: 436.845 MHz 1200 bps AFSK AX.25

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=74
[02092011]
=====
CO-58 CubeSat XI-V
Catalog number: 28895
Launch Date: October 27, 2005 0652z
Launch site: Plesetsk Missile and Space Complex, Russia

Status: Operational - CW Beacon only

Current Mode: /u

Telemetry Downlink: 437.4250 MHz AFSK 1200bps using AFK protocol
Beacon: 437.2750 MHz CW

Callsign: JQ1YGW

Official Webpage: http://www.space.t.u-tokyo.ac.jp/cubesat/mission/V/

Pictures received by Mineo Wakita - JE9PEL:
http://www.ne.jp/asahi/hamradio/je9pel/xivpicte.htm

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=37
[02092011]
=====
CO-57 CubeSat XI-IV
Catalog number: 27848
Launch date: June 30, 2003 1415z
Launch site: Plesetsk Missile and Space Complex, Russia

Status: ?????

Current Mode: /u

Beacon: 436.8475 MHz CW
Telemetry : 437.4900 MHz AFSK 1200 BPS

Callsign: JQ1YGW

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID=96&retURL
=/satellites/status.php

Official Webpage: http://www.space.t.u-tokyo.ac.jp/cubesat/mission/V/
[02092011]
=====
QuakeSat
Catalog Number: 27845
Launch Date: June 30, 2003 1415z
Launch site: Plesetsk Missile and Space Complex, Russia

Status: Telemetry only

Current Mode: 9600 baud data packet

Mode U packet
Downlink: 436.675 MHz 9k6 BPS

Quakesat webpage:
http://www.quakefinder.com/services/quakesat-ssite/
[02252011]
=====
CO-55 Cute-1.7+APD II
Catalog Number: 27844
Launch date: June 30, 2003 1415z
Launch site: Plesetsk Missile and Space Complex, Russia

Status: Operational

Current Mode: CW downlink worldwide
AX25 Packet with uplink command over Japan only

Mode U Telemetry
Downlink: 437.4000 MHz AFSK 1200 BPS

Mode U TLM Beacon
Downlink: 436.8375 MHz CW

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID=69&retURL
=/satellites/status.php

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=78
[02092011]
=====
NO-44 PCSAT
Catalog number: 26931
Launch Date: September 30, 2001 0240z
Launch site: Kodiak Launch Complex, Alaska, USA

Status: Telemetry only

Current Mode: V/v

General Usage Uplink/Downlink: 145.827 MHz 1200 Baud
Special Usage Downlink: 144.390 Mhz 1200 Baud

PCSAT APRS page: http://pcsat.aprs.org

aprstlm Telemetry Decoder program:
http://www.xciv.org/~iain/aprstlm/v1.2/
[02092011]
=====
RS-22 RADIO SPORT 22 (MOZHAYETS 4)
Catalog number: 27939
Launch Date: September 27, 2003 0612z
Launch site: Plesetsk Missile and Space Complex, Russia

Status: Operational - 70cm cw only

Current Mode: /u

CW Beacon - 435.352 MHz
145.818 MHz

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID=76&retURL
=/satellites/status.php
[02092011]
=====
LO-19 LUSAT
Catalog number: 20442

Launch date: January 22, 1990
Launch site: Kourou, French Guiana

Status: CW Beacon only

Uplinks: 145.840 MHz 1200-baud Manchester FSK
145.860 MHz 1200-baud Manchester FSK
145.880 MHz 1200-baud Manchester FSK
145.900 MHz 1200-baud Manchester FSK

CW downlink: 437.125 MHz

Digital downlink: 437.150 MHz SSB (RC-BPSK 1200-baud PSK)

Broadcast Callsign: LUSAT-11
BBS: LUSAT-12

General information and telemetry samples can be found at:
www.telecable.es/personales/ea1bcu
[02092011]
=====
UO-11 OSCAR-11
Catalog number: 14781
Launch Date: March 1, 1984
Launch site: Vandenburg AFB, California, USA

Status: Operational ?

Current Mode: /v

Telemetry Downlink: 145.825 MHz FM 1200 AFSK
UHFBeacon: 435.025 MHz
Mode-S Beacon: 2401.500 MHz

Mode and Antenna Polarization:
V: RHCP
S: LHCP

Webpage: http://www.users.zetnet.co.uk/clivew/
MPEG3 files: http://www.ne.jp/asahi/hamradio/je9pel/uo11tlme.htm
[07052011]
=====
INTERNATIONAL SPACE STATION (ISS) - ARISS
Catalog number: 25544
Launch date: November 20, 1998 0640z (ZARYA module)
Launch sites: Baikonur, Kazakhstan
Kourou, French Guiana
Uchinoura Space Center, Japan
Kennedy Space Center, Titusville, Florida, USA

Status: Operational

Current Active Modes: FM Repeater - OFF
Voice - V/v

BBS - U/u
2m APRS - OFF
70cm APRS - ON
70cm Digi - ON
SSTV - OFF

Expedition 32 Crew (July 2012 - November 2012):
Commander: Gennady Padalka RN3DT
Flight Engineer: Joe Acaba KE5DAR
Flight Engineer: Sergei Revin RN3BS
Flight Engineer: Sunita Williams KD5PLB
Flight Engineer: Yuri Malenchenko RK3DUP
Flight Engineer: Akihiko Hoshide KE5DNI

Available Modes and Frequencies:
Digital/APRS:
Worldwide 2m packet uplink: 145.825 MHz FM 1k2
Worldwide 2m packet downlink: 145.825 Mhz FM 1k2
Worldwide 70cm packet uplink: 437.550 Mhz FM 1k2
Worldwide 70cm packet downlink: 437.550 Mhz FM 1k2

Voice:
Region 1 voice uplink: 145.200 MHz FM
Region 2/3 voice uplink: 144.490 MHz FM
Worldwide downlink: 145.800 MHz FM

Crossband Repeater:
Repeater Uplinks: 1269.650 MHz FM
437.800 MHz FM
145.990 MHz FM - 67.0 PL (Kenwood)
Repeater Downlink: 145.800 MHz FM
437.800 MHz FM (Kenwood)

SSTV Robot 36:
Downlink: 145.800 MHz FM

Mode and Antenna Polarization:
V: Linear
U: Linear

Callsigns:
Belgian: OR4ISS
German: DP0ISS
Russian: RS0ISS
RZ3DZR
United States: NA1SS
2m Packet Mailbox: RS0ISS-11
2m Digipeater alias: ARISS
70cm Packet Mailbox: RS0ISS-1
70cm Digipeater callsign: RS0ISS
70cm Digipeater alias: ARISS

Official ARISS Webpage: http://www.rac.ca/ariss
ISS Fan Club Webpage: http://www.issfanclub.com
APRS tracking page: http://www.ariss.net/

ISS Daily Crew Schedule: http://spaceflight.nasa.gov/station/timelines
Remember that the crew operates on UTC time. Also, all of the time
line is NOT translated from Russian and posted.
[08062012]
NNNN
/EX

SB SAT @ AMSAT W8ISS $WSR-233.S3
WSR 233 Part 3 08/21/2012

AMSAT NEWS SERVICE BULLETIN 233.S3
FROM AMSAT HQ SILVER SPRING, MD, August 21, 2012
TO ALL RADIO AMATEURS
BID: $WSR-233.S3

THE FOLLOWING ARE IN ORBIT BUT ARE NON-OPERATIONAL AT THIS TIME:

NANOSAIL-D
Catalog Number: 37361
Ejection Date: January 17, 2011

Status: Non - Operational

Downlink: 437.270 MHz AX.25

URL: http://nanosaild.engr.scu.edu/dashboard.htm

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=115
[07302012]
=====
HO-68 HOPE-1 (CAS-1) (XW-1)
Catalog Number: 36122
Launch Date: December 15, 2009 0231z
Launch site: Taiyuan Space Center, PRC

Status: Telemetry only

Callsign:
Broadcast: BJ1SA-11
BBS: BJ1SA-12

Uplinks: 145.8250 MHz FM, PL 67.0 Hz.
145.9250 - 145.9750 MHz SSB/CW
145.8250 MHz AFSK 1200 BPS
Downlinks: 435.6750 MHz FM
435.7650 - 435.7150 MHz SSB/CW
435.6750 MHz AFSK 1200 BPS

Beacon: 435.7900 MHz CW

Mode and Antenna Polarization:
V: LHCP 2.0dBi max
U: RHCP 3.0dBi max

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=108

For more information about XW-1 (CAS-1):
http://
[04302012]
=====
SO-67 SumbandilaSat
Catalog Number: 35870
Launch Date: September 17, 2009 1555z
Launch site: Baikonur, Kazakhstan

Status: Non - Operational

Callsign: ZS0SUM

Uplink: 145.875MHz FM tone 233.6 Hz
Downlink: 435.345MHz FM

Mode and Antenna Polarization:
V: Linear
U: Linear

For more information about SO-67:
http://www.amsatsa.org.za/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=88
[01272012]
=====
CP4
Catalog Number: 31132
Launch Date: April 17, 2007

Status: Non-Operational

Current Mode: /u

TLM Downlink: 437.325 MHz 1200 bps FSK AX.25
CW Beacon: 437.325 MHz CW

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=79
[09062010]
=====
LIBERTAD-1
Catalog Number: 31128
Launch Date: April 17, 2007

Status: Non-Operational

Current Mode: V/u APRS Packet ax25

Callsign: 5K3L

Uplink: 145.825 MHz 1200 AFSK ax25 APRS
Downlink: 437.399 MHz 1200 AFSK ax25 APRS

Telemetry Beacon: 437.4050 MHz 1200 AFSK ax25

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=76
[09062010]
=====
PO-63 PEHUENSAT-1
Catalog Number: 29712
Launch Date: January 10, 2007

Status: Non-Operational

Current Mode: V/v

Uplink/Downlink: 145.825 Mhz FM
Voice Recorder: 145.825 Mhz FM

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=51
[09062010]
=====
NCUBE-2
Catalog number: 28897
Launch Date: October 27, 2005

Status: Still attached to XO-53 (SSETI)?

Proposed Callsign: TBA
Proposed Transmit Frequency: 437.305
2407.250

Official Website: http://www.ncube.no

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=24
[09062010]
=====
XO-53 SSETI
Catalog number: 28894
Launch Date: October 27, 2005

Status: Non-operational

Voice Uplink: 437.250 MHz FM 67Hz CTCSS
Voice Downlink: 2401.835 MHz FM
Packet Up/Downlink: 437.250 MHz 9k6 packet
Packet Downlink 2401.835 MHz 38k4 packet

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=54
[09062010]

=====
UWE-1
Catalog Number: 28892
Launch Date: October 27, 2005

Status: Non-Operational

Mode U Telemetry
Downlink: 437.5050 MHz 9600 AFSK

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=53
[09062010]
=====
AO-51 ECHO
Catalog number: 28375
Launch date: June 29, 2004 0745z
Launch site: Baikonur, Kazakhstan

Status: Non - Operational

Current Mode(s):
Voice repeater: V/u
Uplink: 145.880 MHz FM
Downlink: 435.150 MHz FM

Telemetry: Recovery efforts
Downlink: 435.150MHz 9k6

Analog voice downlink: 435.300 MHz FM
435.150 MHz FM
2401.200 Mhz FM
Analog voice uplink: 145.860 MHZ FM
145.880 MHz USB
145.880 MHz FM
145.920 MHz FM
145.920 MHz FM - 67 Hz PL tone burst
1268.705 MHz FM
Digital Downlinks: 435.150 MHz FM 38k4 PBP, 1 watt output
435.150 MHz FM 9k6 Pacsat Broadcast Protocol
2401.200 MHz FM 38k4 bps, AX.25
Digital Uplink: 145.860 MHz FM 9k6 Pacsat Broadcast Protocol
1268.703 mhz FM 9k6 Pacsat Broadcast Protocol
Beacon: 435.150 MHz

Mode and Antenna Polarization:
T: Linear
V: Linear
U: TX A (usually digital)LHCP
TX B (usually analog) RHCP
L: Linear
S: Linear

Broadcast: PECHO-11
BBS: PECHO-12

Official Webpage: http://www.amsat.org/amsat-new/echo/CTNews.php

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=19
[12062011]
=====
CANX-1
Catalog Number: 27847
Launch Date: June 30, 2003

Status: Non-Operational

Downlink: 437.8800 MHz AFSK 1k2bps
[06052009]
=====
DTUSAT
Catalog Number: 27842
Launch Date: June 30, 2003

Status: Non-Operational

Current Mode: 2k4 AFSK Packet last reported

Downlink: 437.475MHz

Officail webpage: http://dtusat1.dtusat.dtu.dk/

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID=101&retURL
=satellites/all_oscars.php
[02212009]
=====
AO-49 AATiS OSCAR-49 (SAFIR-M)
Catalog number: 27605
Launch Date: December 20, 2002

Status: Non-operational.

Uplink: 435.275 MHz 1200-baud AFSK
Downlink: 145.825 MHz 9600-baud FSK
(optional voice message)

Broadcast callsign: DP0AIS

Official webpage: http://amend.gmxhome.de
[01222007]
=====
MO-46 TIUNGSAT-1
Catalog number: 26548
Launch date: September 26, 2000

Status: Telemetry only

Uplinks: 145.850 MHz
145.925 MHz 9600-baud FSK
Downlink: 437.325 MHz

Broadcast callsign: MYSAT3-11
BBS: MYSAT3-12

TiungSat-1 is Malaysia's first micro-satellite and in addition to
commercial land and weather imaging payloads offers FM and FSK
Amateur Radio communication.

TiungSat-1, named after the mynah bird of Malaysia, was developed as
a collaborative effort between the Malaysian government and Surrey
Satellite Technology Ltd.
[03302009]
=====
NO-45 SAPPHIRE
Catalog number: 26932
Launch Date: September 30, 2001

Status: Non-Operational

Downlink: 437.095 MHz 1200 baud AX-25 AFSK
Uplink: 145.945 MHz UI Digipeater
Digi Callsign: KE6QMD

Everyone is welcome to use the digipeating/APRS features of Sapphire,
as per the user service agreement located at the following URL:
http://web.usna.navy.mil/~bruninga/pcsat/contract.txt
[03132005]
=====
SO-42 SAUDISAT-1B
Catalog number: 26549
Launch date: September 26, 2000

Status: Non-Operational

Downlink: 437.075 MHz

Broadcast Callsign: SASAT2-11
BBS: SASAT2-12

Further information is available at:
http://www.amsat.org/amsat/sats/n7hpr/so42.html
[01222007]
=====
SO-41 SAUDISAT-1A
Catalog number: 26545
Launch Date: September 26, 2000

Status: Non-Operational

Uplink: 145.850 MHz
Downlink: 436.775 MHz

Broadcast Callsign: SASAT1-11
BBS: SASAT1-12

Further information is available at:
http://www.amsat.org/amsat/sats/n7hpr/so41.html
[01222007]
=====
AO-40 AMSAT OSCAR 40
Catalog number: 26609
Launch Date: November 16, 2000

Status: Non-Operational

Uplinks

V-band: 145.840 - 145.990 MHz CW/LSB
U-band: 435.550 - 435.800 MHz CW/LSB
L1-band: 1269.250 - 1269.500 MHz CW/LSB
L2-band: 1268.325 - 1268.575 MHz CW/LSB

Downlinks

S2-band: 2401.225 - 2401.475 MHz CW/USB
K-band: 24048.010 - 24048.060 MHz CW/USB
Beacon: 2401.323 MHz
24048.035 MHz

P3-D Telemetry Beacons (IHU)

BEACON General Beacon(GB) Middle Beacon(MB) Engineering Beacon(EB)
2 m none 145.898 MHz none
70cm 435.438 MHz 435.588 MHz 435.838 MHz
13cm(1) 2400.188 MHz 2400.338 MHz 2400.588 MHz
13cm(2) 2401.173 MHz 2401.323 MHz 2401.573 MHz
3cm 10450.975 MHz 10451.125 MHz 10451.375 MHz
1.5cm 24047.885 MHz 24048.035 MHz 24048.285 MHz
[07162007]
=====
OO-38 OPAL
Catalog Number: 26063
Launch Date: January 27, 2000

Status: Non-Operational

Mode U TLM Beacon
Downlink: 437.1000 MHz 9600 FSK
[08132007]
=====
UO-36 UoSAT-12
Catalog number: 25693
Launch date: April 21, 1999

Status: Unknown

Uplink: 145.960 MHz (9600-baud FSK)
Downlinks: 437.025 MHz
437.400 MHz

Broadcast Callsign: UO121-11
BBS: UO121-12

The VK5HI viewer shareware for UO-36 is available on the AMSAT-NA web
site at the following URL:
ftp://ftp.amsat.org/amsat/software/win32/display/ccddsp97-119.zip
[01222007]
=====
SO-35 SUNSAT
Catalog Number: 25636
Launch date:February 23, 1999

Status: Non-Operational

Downlink: Mode B Repeater: 436.291 MHz
Mode J Digipeater: 436.250 MHz

Uplinks: Mode B Repeater: 145.825 MHz
Mode J Digipeater: 145.825 MHz
145.900 MHz

For more information of SUNSAT vist the satellite web site:
http://esl.ee.sun.ac.za/projects/sunsat/
[01222007]
=====
PO-34 PANSAT
Catalog number: 25520
Launch date: October 30, 1998

Status: Telemetry downloads only

Uplink/downlink: 436.500 MHz

Official Webpage: http://www.sp.nps.navy.mil/pansat/
[05092004]
=====
SO-33 SEDSAT-1
Catalog number: 25509
Launch date: October 24, 1998

Status: Semi-operational

Downlink: 437.910 MHz FM (9600-baud FSK)

The satellite is not currently available for uplink transmissions and
the image and transponder recovery efforts have been unsuccessful.

For more information on SedSat-1 visit the satellite web site:
http://seds.uah.edu/projects/sedsat/sedsat.htm
[09042006]
=====

GO-32 Gurwin TechSat-1B
Catalog number: 25397
Launch Date: July 10, 1998

Status: Non-Operational

Current Modes:
Telemetry : /u

Downlink: 435.225 MHz FM (9600-baud FSK)
435.325 Mhz - Not Available - temperature problems
Uplinks: 145.850 FM
145.890 FM
145.930 FM
1269.700 FM
1269.800 FM
1269.900 FM

Broadcast Callsign: 4XTECH-11
BBS Callsign: 4XTECH-12

More information of GO-32 can be found at:
http://asri.technion.ac.il/techsat/

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID=14&retURL
=/satellites/status.php
[07172010]
=====
TO-31 TMSAT-1
Catalog number: 25396
Launch Date: July 10, 1998

Status: Non-operational

Uplink: 145.925 MHz 9600 baud FSK
Downlink: 436.925 MHz 9600 baud FSK

Broadcast callsign: TMSAT1-11
BBS: TMSAT1-12
[05012006]
=====
MO-30 UNAMSAT-2
Catalog Number: 24305
Launch Date: September 5, 1996

Status: Non-operational

Downlink: 435.1380 MHz AFSK 1200 BPS
Downlink: 435.2060 MHz AFSK 1200 BPS
Uplink: 145.8150 MHz AFSK 1200 BPS
Uplink: 145.8350 MHz AFSK 1200 BPS
Uplink: 145.8550 MHz AFSK 1200 BPS
Uplink: 145.8750 MHz AFSK 1200 BPS

[06042009]
=====
PO-28 POSAT-1
Catalog number: 22829
Launch Date: September 25, 1993

Status: Non-operational

Downlink: 429.950
Uplink: Not until handover back to Amatuer usage

Broadcast callsign: POSAT1-11
BBS callsign: POSAT1-12

AMSAT Webpage: http://www.amsat.org/amsat/sats/n7hpr/po28.html
POSAT-1 webpage:
http://www.ee.surrey.ac.uk/SSC/CSER/UOSAT/missions/posat1.html
[01012009]
=====
IO-26 ITAMSAT
Catalog number: 22826
Launch Date: September 26, 1993

Status: PSK carrier only

Current Mode:

Uplinks: 145.875 MHz FM 1200-baud
145.900 MHz FM 1200-baud
145.925 MHz FM 1200-baud
145.950 MHz FM 1200-baud

Downlink: 435.808 MHz PSK

Broadcast Callsign: ITMSAT-11
BBS: ITMSAT-12

Official webpage: http://www.itamsat.org
AMSAT Webpage: http://www.amsat.org/amsat/sats/n7hpr/io26.html
[01212007]
=====
KO-25 KITSAT
Catalog number: 22828
Launch date: September 26, 1993

Status: Non-operational

Uplink: 145.980 MHz FM 9600-baud FSK
Downlink: 436.500 MHz FM

Broadcast Callsign: HL02-11
BBS: HL02-12
[05092004]
=====

AO-24 ARSENE
Catalog Number: 22654
Launch Date: May 13, 1993

Status: Non-operational

Uplink: 435.0625 MHz FM 1k2bps AFSK
435.1125 MHz FM 1k2bps AFSK
435.1375 MHz FM 1k2bps AFSK
Downlink: 145.9750 MHz FM 1k2bps AFSK
2446.5025 MHz FM 1k2bps AFSK

Beacon: 2446.4700 MHz CW

Broadcast callsign:
BBS:
[12162009]
=====
KO-23 KITSAT
Catalog number: 22077
Launch date: August 10, 1992

Status: Non-operational

Uplink: 145.900 MHz FM (9600-baud FSK)
Downlink: 435.170 MHz FM

Broadcast Callsign: HLO1-11
BBS: HLO1-12
[01222007]
=====
UO-22 UOSAT
Catalog number: 21575
Launch date: July 17, 1991

Status: Non-Operational

Uplink: 145.900 FM 9600-baud FSK
Downlink: 435.120 MHz FM

Broadcast Callsign: UOSAT5-11
BBS: UOSAT5-12
[01222007]
=====
AO-21 AMSAT-OSCAR 21
Catalog Number: 21087
Launch Date: January 29, 1991

Status: Non-Operational

Uplink: 435.041 MHz FM DSP
Downlink: 145.983 MHz FM DSP
[01222007]
=====

FO-20 JAS-1b
Catalog number: 20480
Launch Date: February 07, 1990

Status: Non-Operational

Beacons: 435.795 MHz CW
435.910 MHz AX25

Voice Transponder:
Uplink: 145.900 to 146.000 MHz CW/LSB
Downlink: 435.800 to 435.900 MHz CW/USB

Digital Transponder:
Uplinks: 145.850 MHz
145.870 MHz
145.890 MHz
145.910 MHz
Downlink: 435.910 MHz

More FO-20 info can be found at:
http://www.amsat.org/amsat/sats/n7hpr/fo20.html
[01152007]
=====
WO-18 WEBERSAT
Catalog Number: 20441
Launch Date: January 22, 1990

Status: Non-Operational

Downlink: 437.104 MHz SSB 1200 Baud PSK AX.25
[05012006]
=====
DO-17 Dove
Catalog Number: 20440
Launch Date: January 22, 1990

Status: Non-operational.

Downlink: 145.825 MHz FM 1200 Baud AFSK
Beacon: 2401.220 MHz
[05012006]
=====
AO-16 PACSAT
Catalog number: 20439
Launch Date: January 22, 1990

Status: non-operational

Current Mode: V/u

Uplink: 145.900 MHz FM 1200-baud Manchester FSK (reserved)
145.920 MHz FM VOICE
145.940 MHz FM 1200-baud Manchester FSK (reserved)

145.960 MHz FM 1200-baud Manchester FSK (reserved)

Downlink: 437.026 MHz USB VOICE
(1200-baud PSK - MBL Telemetry Only)

Mode-S Beacon: 2401.1428 MHz [NO FUTURE OPERATIONS PLANNED]

Mode and Antenna Polarization:
U: RC 437.050 MHz RHCP
PSK 437.026 MHz LHCP
V: Linear

Broadcast Callsign: PACSAT-11
BBS: PACSAT-12

AO-16 AMSAT Webpage: http://www.amsat.org/amsat/sats/n7hpr/ao16.html
[07242009]
=====
UO-15 UoSAT-4
Catalog Number: 20438
Launch Date: January 22, 1990

Status: Non-operational

Uplink: ?
Downlink: 435.1250MHz (?)
435.1200MHz (?)
[06042009]
=====
UO-14 UoSAT-3
Catalog number: 20437
Launch date: January 22, 1990

Status: Non-operational

Uplink: 145.975 MHz FM
Downlink: 435.070 MHz FM
[05092004]
=====
FO-12 Fuji-OSCAR 12
Catalog Number: 16909
Launch Date: August 12, 1986

Status: Non-Operational

Mode V/U (J) Linear Transponder (Inverting):
Uplink: 145.9000 - 146.0000 MHz SSB/CW
Downlink 435.8000 - 435.9000 MHz SSB/CW

Mode V/U (J) Packet:
Uplink: 145.8500 MHz MFSK 1200 BPS
Uplink: 145.8700 MHz MFSK 1200 BPS
Uplink: 145.8900 MHz MFSK 1200 BPS
Uplink: 145.9100 MHz MFSK 1200 BPS

Downlink 435.9100 MHz PSK 1200 BPS

Telemetry Beacon: 435.7950 MHz SSB/CW
[01152007]
=====
AO-10 OSCAR 10
Catalog number: 14129
Launch Date: June 16, 1983

Status: Non-operational

Uplink: 435.030 to 435.180 MHz CW/LSB
Downlink: 145.975 to 145.825 MHz CW/USB

Beacon: 145.810 MHz (unmodulated carrier)

W4SM has more information about the satellite at the following URL:
http://www.cstone.net/~w4sm/AO-10.html
[05092004]
=====
AO-8 AMSAT-OSCAR 8
Catalog Number: 10703
Launch Date: March 3, 1978

Status: Non-Operational

Mode V/U (J) Linear Transponder (Non-Inverting): Non-Operational
Uplink: 145.9000 - 146.0000 MHz SSB/CW
Downlink 435.1990 - 435.2000 MHz SSB/CW

Mode V/U (J) TLM Beacon: Non-Operational
Downlink 435.0950 MHz CW

Mode V/A (A) Linear Transponder (Non-Inverting): Non-Operational
Uplink: 145.8500 - 145.9000 MHz SSB/CW
Downlink 29.4000 - 29.5000 MHz SSB/CW

Mode V/A (A) TLM Beacon: Non-Operational
Downlink 29.4020 MHz CW
[01152007]
=====
AO-6 AMSAT-OSCAR 6
Catalog Number: 06236
Launch Date: October 15, 1972

Status: Non-Operational

Uplink: 145.9000 - 146.0000 MHz SSB/CW
Downlink: 29.4500 - 29.5500 MHz SSB/CW
Beacons: 29.450 MHz
435.100 MHz
[01312008]
=====
AO-5 Australis-OSCAR 5
Catalog Number: 04321

Launch Date: January 23, 1970

Status: Non-Operational

Telemetry Beacons: 144.0500 MHz CW
29.4500 MHz CW
[01152007]
=====
OSCAR III
Catalog Number: 01293
Launch Date: March 09, 1965

Status: Non-Operational

Uplink: 145.9750 - 146.0250 MHz SSB/CW
Downlink: 144.3250 - 144.3750 MHz SSB/CW
[01012007]
=====
RS-15 RADIO SPORT RS-15
Catalog number: 23439
Launch Date: December 26, 1994

Status: Non-operational

Uplink: 145.858 to 145.898 MHz CW/USB
Downlink: 29.354 to 29.394 MHz CW/USB

Beacon 1: 29.352 MHz (intermittent)
Beacon 2: 29.398 MHz

SSB meeting frequency: 29.380 MHz (unofficial)
[06202004]
=====
RS-13 RADIO SPORT RS-13
Catalog number: 21089
Launch date: February 5, 1991

Status: Non-operational

Uplink: 21.260 to 21.300 MHz CW/USB
Downlink: 145.860 to 145.900 MHz CW/USB

Beacon: 145.860 MHz

Robot: 145.908 MHz
[05232004]
=====
RS-12 RADIO SPORT RS-12
Catalog number: 21089
Launch date: February 5, 1991

Status: Non-operational

Uplink: 21.210 to 21.250 MHz CW/USB
Downlink: 29.410 to 29.450 MHz CW/USB

Beacon: 29.408 MHz

Robot: 29.454 MHz
[05232004]
NNNN
/EX

ANS is released worldwide via the AMSAT ANS e-mail reflector and a live radiocast on the AMSAT-NA 20-meter net held each Sunday on 14.282 MHz. Pre-net operations start at 18:00 UTC, with current ANS bulletins transmitted to the eastern U.S. at 19:00 UTC and to the western U.S. at 19:30 UTC.

Information on AMSAT-NA is available at the following URL:
http://www.amsat.org

Mailing address:
AMSAT-NA
850 Sligo Avenue, Suite 600
Silver Spring, Maryland 20910-4703

Voice: 301-589-6062
888-322-6728
FAX: 301-608-3410

Currently, AMSAT-NA supports the following (free) mailing lists:

* AMSAT News Service (ANS)
* General satellite discussion (AMSAT-BB)
* Orbit data (KEPS)
* Manned space missions (SAREX)
* District of Columbia area (AMSAT-DC)
* New England area (AMSAT-NE)
* AMSAT Educational Liaison mailing list (AMSAT-EDU)
* AMSAT K-12 Educational Liaison mailing list (AMSAT-K12)

A daily digest version is available for each list.

To subscribe, or for more list information, visit the following URL:
http://www.amsat.org/mailman/listinfo/ans

In addition to regular membership, AMSAT-NA offers membership in the President's Club. Members of the President's Club, as sustaining donors to AMSAT Project Funds, will be eligible to receive additional benefits. Application forms are available from the AMSAT-NA Office.

This week's Weekly Satellite Report Editor is James French, W8ISS.

ANS is always dedicated to past ANS editor 'BJ' Arts, WT0N, and to the memory of longtime AMSAT supporters Werner Haas, DJ5KQ, Dennis Kitchen, G0FCL and John Branegan GM4IHJ.

Please send any amateur satellite news or reports to: ans-editor{at} amsat.org
NNNN

/EX

123. ANS-239 AMSAT News Service Weekly Bulletins

Newsgroup: rec.radio.amateur.space
Date: 2012-08-26 01:46:19 UTC
From: JoAnne Maenpaa <k9jkm@comcast.net>
Message-ID: <001f01cd832c$91f5b0d0$b5e11270$@net>
Source record: 223
Cross-posted to: rec.radio.amateur.space,rec.radio.info

AMSAT NEWS SERVICE
ANS-239

ANS is a free, weekly, news and information service of AMSAT North America, The Radio Amateur Satellite Corporation. ANS reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in designing, building, launching and communicating through analog and digital Amateur Radio satellites.

Please send any amateur satellite news or reports to:
ans-editor at amsat.org

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* Reminder: Ballots for the AMSAT-NA Board of Directors Election *
* are due by mail by the close of business on September 15, 2012 *
****

In this edition:

* AMSAT 2012 Space Symposium On-Line Registration Opens
* AMSAT 2012 Space Symposium Second Call for Papers
* Rooms Still Available for AMSAT-UK Colloquium
* Successful ARISS Contacts With Australia and Japan
* South Africa University CubeSat With HF Beacon to Launch in November
* Mars Landing Received Signals Recording Posted On-Line
* Check Your Keps - ISS Orbit Successfully Readjusted
* Help Wanted: AMSAT News Service Rotating Editor Positions Available
* NASA Announces SpaceX Cargo Missions to ISS Begin in October
* Satellite Shorts From All Over

SB SAT @ AMSAT $ANS-239.01
ANS-239 AMSAT News Service Weekly Bulletins

AMSAT News Service Bulletin 239.01
>From AMSAT HQ SILVER SPRING, MD.
August 26, 2012
To All RADIO AMATEURS
BID: $ANS-239.01

AMSAT 2012 Space Symposium On-Line Registration Opens

AMSAT announces that the registration for the 2012 AMSAT Space Symposium, to be held on Friday, October 26th through Sunday, October 28th is now open on-line. A mail-in option is also

available those preferring this approach.

See the AMSAT Web Store to complete your on-line registration:
http://store.amsat.org/catalog/ - then click on the "AMSAT 2012
Symposium" item in the top left box on your web browser.

Downloadable paper registration forms in MS-Word format and
PDF format are available on the 2012 Symposium page:
http://www.amsat.org/amsat-new/symposium/2012/index.php

Prices for the Symposium are:
+ Symposium Registration including Proceedings
o Through September 23, 2012: $ 45.00
o Starting September 24, 2012: $ 50.00
o At the Door: $ 55.00

+ Saturday Evening Banquet $ 45.00

+ Sunday Morning Area Coordinators' Breakfast $ 15.00

+ Monday (Oct 29) bus trip to KSC and entrance ticket $ 100.00

The Symposium weekend will feature:

+ Space Symposium with Amateur Satellite Presentations
+ Operating Techniques, News, & Plans from the Amateur Satellite World
+ Board of Directors Meeting open to AMSAT members
+ Meet Board Members and Officers
+ Annual General Membership Meeting
+ Annual Banquet-Keynote Speaker and Door Prizes

The Symposium Hotel is the Holiday Inn at Orlando-International
Airport is located one mile from the Orlando International Airport
(MCO). The AMSAT discount rate is $99 + taxes per night. The reser-
vation block code used when calling the hotel directly is AMT.

The hotel telephone number is 407-851-6400. The Symposium Committee
recommends you make reservations by calling the hotel directly rather
than through the Web. Cutoff date for reservations is Oct 6, 2012.
The direct link to the hotel web page is:
http://www.holidayinn.com/hotels/us/en/orlando/mcoap/hoteldetail

The hotel offers free Internet connection and free airport shuttle.
When you arrive at the Orlando Airport call 407-709-5310 to request
the shuttle.

The Orlando International Airport (MCO) is the closest to the Sympos-
ium and is served by most major air carriers. The hotel address is:
5750 T.G. Lee Blvd • Orlando, FL 32822. A map link is included on
the hotel web page.

[ANS thanks the 2012 Symposium Committee for the above information]

AMSAT 2012 Space Symposium Second Call for Papers

Symposium Proceedings Editor, Dan Schultz, N8FGV issued the second Call For Papers for the 2012 AMSAT Annual Meeting and Space Symposium to be held in Orlando, Florida on the weekend of October 26-28, 2012.

Proposals for papers, symposium presentations and poster presentations are invited on any topic of interest to the amateur satellite community:

+ Papers for publication in the Proceedings

+ Symposium Presentations

+ Poster Presentations

+ Equipment and Operating Demonstrations

Dan requests a tentative title of your presentation as soon as possible, with final copy to be submitted by October 1 for inclusion in the printed proceedings. Abstracts and papers should be sent to Dan Schultz, N8FGV, at n8fgv@amsat.org

The Symposium Committee still has prime slots available on the speaker's schedule. The AMSAT Symposium depends on YOU to make it happen, without speakers there is no Symposium.

Please consider doing a presentation, even if you have never done so in the past. We are especially interested in papers and presentations involving our educational partnerships with K-12 and university level classrooms. Education is quickly becoming critical for our future rides to space.

[ANS thanks 2012 Symposium Proceedings Editor Dan Schultz, N8FGV for the above information]

Rooms Still Available for AMSAT-UK Colloquium

AMSAT-UK Hon Sec Jim List, G3WGM says, "There are still rooms available at the hotel at which the AMSAT-UK Colloquium will be held on September 14, 15 and 16. The location of the Colloquium is at the Holiday Inn, Guildford, Surry, UK. TO BE SURE OF A ROOM AT THE HOTEL YOU SHOULD BOOK AS SOON AS POSSIBLE TO AVOID DISSAPPOINTMENT!"

The Colloquium is a truly international event and will include:

+ New this year will be guided tours of the new SSTL satellite construction facility, the Kepler Building, including a view of the clean rooms. This facility has been open less than a year, and is hugely impressive! Numbers on the tours are limited and strictly first come first served basis. Detailed timings to follow.

+ Presentations by experts from AMSAT-SA, AMSAT-NA and AMSAT-DL on their current spacecraft projects.

+ CubeSat presentations on UKube-1, STRaND-1, STRaND-2 and, of course the FUNcube-1 project.

+ We will be including an exclusive roundup of a number of new live and potential spacecraft projects that are under investigation and/or development.

+ Additionally a number of presentations are planned covering new communications techniques and similar futuristic topics.

+ Plus all the usual networking opportunities, the gala dinner and auction/raffle, plus the opportunity to operate the sophisticated groundstation in the GB4FUN mobile demonstration module.

Exclusive New Product Launch at AMSAT-UK Colloquium

AMSAT-UK are delighted to announce that Howard Long, G6LVB, will be present at the Colloquium this year and will be launching a new "FUN-cube Dongle PRO-PLUS" during his presentation.

Full technical details have been embargoed until his talk and we are not permitted to steal his thunder by releasing further details of this new product in advance. Attendees at the Colloquium will therefore be the first to learn about Howard's latest development which will further advance the applications for SDR devices.

Further details are at: http://www.uk.amsat.org/9565#more-9565 - and at - http://www.uk.amsat.org/colloquium/twelve.

You can book online using PayPal or Credit Card at:
http://shop.amsat.org.uk/shop/catalog/browse

[ANS thanks AMSAT-UK Hon Sec Jim List, G3WGM and Trevor, M5AKA for the above information]

Successful ARISS Contacts With Australia and Japan

An ARISS contact was held with students at the Kangaroo Inn Area School in Kangaroo Inn, South Australia on Tuesday, August 14 via station W6SRJ in California. ISS astronaut Sunita Williams, KD5PLB participated in the session, answering over 20 questions posed by the students. Nearly 90 visitors attended the event, including local politician Mitch Williams and his wife, the ABC (Australian Broadcasting Corporation) radio network, WIN 8 regional TV and representatives from three newspapers. The contact complemented a science curriculum covering space and space exploration.

On Thursday, August 16, an ARISS contact was held between students attending Wada Elementary School in Nagawa Town, Japan and Akihiko Hoshide, KE5DNI, aboard the Space Station, which highlighted a comprehensive education plan covering space, astronomy and radio communications. The event drew an audience of approximately 120 students and guests and garnered extensive media coverage including six tele-

vision stations and five newspapers.

US East Coast ARISS Contact September 1

An ARISS contact with the National Electronics Museum, Linthicum, Maryland is planned for Saturday, September 1 at 15:09:11 UTC. This 42° elevation pass with a direct contact via K3CUJ should be heard along the US East Coast on the 145.800 MHz downlink.

[ANS thanks Carol Jackson, KB3LKI, and Charlie Sufana, AJ9N for the above information]

South Africa University CubeSat With HF Beacon to Launch in November

South African Radio League, SARL News reports that a new CubeSat designed and built by students at the Cape Peninsular University of Technology in Bellville will be launched towards the end of November.

Known by its engineering name ZACube-1, the satellite will be shipped in the next few weeks to Holland where it will be integrated with two other CubeSats in the launch carrier before being shipped for integrating with the DNEPR rocket, joining up to 18 other amateur radio satellites on this launch. (See: http://www.uk.amsat.org/7717)

ZACube-1 carries a HF transmitter operating on 14.099 MHz which will be used for characterization of Hermanus Magnetic Observatory's Dual Auroral Radar Network antenna at SANAE base in Antarctica.

Also aboard ZACube-1 will be a small camera and a telemetry transmitter. Monitor this link at SARL for the audio of an interview with the satellite's project leader:
http://www.amateurradio.org.za/Amateur%20Radio%20TODAY.htm
SA AMSAT has also posted detailed news at:
http://tinyurl.com/ZACube

The IARU Amateur Satellite Frequency Coordination Panel list these frequencies:
+ Beacon 14.099 MHz
+ Uplink 145.860 MHz
+ Downlink 437.345 MHz.

[ANS thanks SA AMSAT, SARL, and AMSAT-UK for the above information]

Mars Landing Received Signals Recording Posted On-Line

An interesting article posted at UniverseToday.com tells more of the technical details of the Entry, Descent, Landing (EDL) phase when the Curiosity Mars Rover landed on Mars. The article also provides a link to the X-band radio signals received during landing.

With a 14 minute radio delay because of the distance between Earth and Mars, how did the JPL team know what was happening on Mars?

UniverseToday describes the signaling process between Mars and Earth: (http://tinyurl.com/MarsEDLTones - universetoday.com)

The Mars Science Lander sent out different tones for each event that happened, and 128 distinct tones indicated when steps in the process were activated; one sound indicated the parachute deployed, while another signaled that the vehicle was in powered flight, and still another that the Sky Crane had been activated. These sounds were a series of basic, special individual radio tones.

They were simple tones, transmitted in X-band, comparable to semaphore codes, rather than full telemetry. The Deep Space Network listened for these direct-to-Earth transmissions. However, Earth went out of view of the spacecraft, "setting" below the Martian horizon, partway through the descent, so the X-band tones were not available for confirming the final steps in descent and landing. By then, the bent-pipe relay of telemetry via the Odyssey spacecraft had begun.

Also listening was the Mars Express spacecraft. It recorded about 20 minutes of the rover's transmissions and tones. ESA engineers have now put together an audio reproduction, compressing the 20 minutes into about 19 seconds of audio that humans can hear that are a "faithful reproduction of the 'sound' of the NASA mission's arrival at Mars
and its seven-minute plunge to the Red Planet's surface," the European Space Agency team wrote. You can listen to the audio on this link: http://blogs.esa.int/mex/files/2012/08/Audio_MELACOM_B_MSL_EDL.mp3

[ANS thanks UniverseToday.com for the above information]

Check Your Keps - ISS Orbit Successfully Readjusted

Space-Travel.com reported on August 22that Europe's ATV-3 unmanned supply spacecraft has raised the International Space Station's orbit to about 261 miles.

The successful orbital readjustment follows a failed attempt August 15 when the ATV-3's engines shut down prematurely because of an increase in temperature on one of the units, leaving the ISS short of its intended orbital height, RIA Novosti reported.

The orbit adjustment Wednesday was done in two stages, with the ATV-3 engines firing for 348 seconds to lift the orbit to 257 miles followed by another burn four hours later that brought the space station to its final altitude.

The maneuver was to prepare for the return to earth of Russia's Soyuz TMA-04M manned spacecraft on September 17 and the docking of

the Soyuz TMA-06M manned spacecraft with the ISS on October 15.

Original news item published at:
http://tinyurl.com/ISS-Reboost (www.space-travel.com)

[ANS thanks Spece-Travel.com for the above information]

Help Wanted: AMSAT News Service Rotating Editor Positions Available

The AMSAT News Service (ANS) is responsible for researching, writing, editing, and publishing the weekly amateur satellite news bulletins.

After the passing of Dee, NB2F, we currently have a two editors who take a turn weekly to publish the bulletins. With the addition of a volunteer, or two, this would generally involve taking a turn about every 3 to 4 weeks.

At present we a looking for interested satellite enthusiasts to join the ANS editorial team. Professional writing/editing experience is NOT a requirement. Your interest and enthusiasm in following and reporting on amateur radio in space will get you started! The ANS Editor team helps each other by rounding up items of interest. Plus we receive submitted items for publication ... so you won't be left all alone!

If you can commit to working on the bulletins for a week on a rotating basis please reply via e-mail to AMSAT News Service Editor JoAnne Maenpaa, K9JKM via k9jkm@amsat.org.

[ANS thanks AMSAT Vice-President User Services, Gould Smith, WA4SXM for the above information]

NASA Announces SpaceX Cargo Missions to ISS Begin in October

CAPE CANAVERAL, Fla. - NASA Administrator Charles Bolden announced Thursday [August 23, 2012] new milestones in the nation's commercial space initiatives from the agency's Kennedy Space Center in Florida. The latest advances made by NASA's commercial space partners pave the way for the first contracted flight of cargo to the International Space Station (ISS) this fall and mark progress toward a launch of astronauts from U.S. soil in the next 5 years.

Bolden announced Space Exploration Technologies (SpaceX) has completed its Space Act Agreement with NASA for Commercial Orbital Transportation Services (COTS). SpaceX is scheduled to launch the first of its 12 contracted cargo flights to the space station from Cape Canaveral in October, under NASA's Commercial Resupply Services Program.

Through the COTS program, NASA provides investments to stimulate the American commercial space industry. As part of its COTS partnership, SpaceX became the first commercial company to resupply the space

station in May, successfully launching its Falcon 9 rocket and Dragon spacecraft to the orbiting complex. During the historic mission, the Dragon was captured by astronauts using the station's robot arm, unloaded and safely returned to Earth carrying experiments conducted aboard ISS. Later this winter, Orbital Sciences Corp. plans to carry out its first test flight under COTS.

The full NASA press release can be found on-line at:
http://www.nasa.gov/exploration/commercial/crew-cargo-milestones.html

[ANS thanks NASA for the above information]

Satellite Shorts From All Over

+ AMSAT joins all of the spacefaring people of Earth in remembering a hero for mankind on the passing on August 25 of Neil Armstrong, the first man to walk on the Moon. Armstrong was 82.

+ AMSAT has received the sad news of the passing QST Managing Editor Joel P. Kleinman, N1BKE, of Meriden, Connecticut. Joel died from injuries received during a house fire. He was 64. Kleinman was responsible for the coordination, organization, control and completion of all aspects of QST's editorial content each month. Kleinman's wife Jayne survived the fire, but is currently in the intensive care unit of a local hospital. The ARRL is collecting condolence messages to forward on to Joel's family. If you would like send a message, please email it to: news@arrl.org.

+ Members of the Grupo DX Caracas announced their YW5B DXpedition to La Blanquilla Island (SA-037) between August 21-27. Activity will be on 160-2 meters using CW, SSB, FM, Satellites and the Digital modes. QSL Manager is DM4TI with instructions on his QRZ.com page. (Ohio/Penn DX Bulletin No. 1075)

+ A video about the amateur radio F-1 CubeSat that is due to be deployed from the International Space Station in September by Japanese astronaut Akihiko Hoshide KE5DNI using the ISS Kibo robot arm can be viewed on the AMSAT-UK web at:
http://www.uk.amsat.org/9746
It was broadcast on the Vietnamese TV station VTC2 and features interviews with Thu Trong Vu XV9AA, Hong Thai Pham and Pham Quang Hung along with a graphics clip showing the proposed deployment of the CubeSat. Part of the interview is held on the roof of the FPT university and shows the antenna array that will be used to command the F-1 CubeSat.

+ Scouts from all over the United States came to this year's Space Jam 6 sponsored by Crew 272 and Troop 17 where a ARISS contact with the ISS was held. Scouts talked with Japanese (JAXA) Astronaut Akihiko Hoshide KE5DNI using the WB9SA Satellite Communications Ham Radio Station on August 5, 2012. Watch on-line at:

http://tinyurl.com/SpaceJam6-ARISS-Contact (www.southgatearc.org)

+ Photos from Mars keep coming in. An HD quality video of Curiosity's descent was assembled from full-resolution 1600 1200 frames from the MARDI descent imager. It also shows the best views yet of the heat shield impact on the surface of Mars:

https://www.youtube.com/watch?feature ayer_embedded&v X5GRPnd4U

+ Add this to your wish list - a personal Unmanned Aerial Vehicle (UAV) is now available. The drone in this video one uses a 2.4 GHz WiFi connection to an iPhone or iPad:
http://www.youtube.com/watch?feature ayer_embedded&v vGvaNnMJM
http://tinyurl.com/Personal-UAV (Southgate ARC)

+ Watch a video by KB3TQO posted on Southgate that shows a simple way to launch amateur radio antennas into the trees, really high. He demonstrates his homemade, bicycle pump powered, air cannon at: http://www.southgatearc.org/news/august2012/antenna_cannon_video.htm

+ The team from Mars Express put this great video together which shows what Mars looks like from above, during an elliptical orbit. They created it using 600 individual still images captured by the Visual Monitoring Camera (VMC), and it shows the view from a visiting spacecraft s slow descent from high above the planet, then speeds up during closest approach, and then slows down again as the orbital distance increases. Orbit Mars via your browser at:
http://www.youtube.com/watch?feature ayer_embedded&v 6EmDQcsy0

+ The next Hudson Valley Satcom net date is Thursday, August 30, at 8 PM EDT (UTC-4 UTC) on the 146.97 MHz MBARC Repeater (PL 100). An echolink connection is available on the N2EYH-L node. More information at: http://www.hvsatcom.org. (Stu, WA2BSS)

+ NASA announced that for its 50th anniversary celebration it will be opening its gates for virtual tours through a partnership with Google Maps and its Street View feature. With over 6,000 panoramic images of the space center you are only a click away at: http://tinyurl.com/SpaceCenterStreetView (maps.google.com)

+ Do you want to live on Mars time? There s an App for that now. Read the article at http://tinyurl.com/MarsTimeApp to decide which one is right for you. (UniverseToday)

+ Photos showing the deployment of the small Russian Sfera satellite from the Space Station by Russian cosmonaut Gennady Padalka, RN3DT, Expedition 32 commander, during this week's EVA can be seen at: http://www.onorbit.com/node/4890.

[ANS thanks everyone for the above information]

/EX

In addition to regular membership, AMSAT offers membership in the President's Club. Members of the President's Club, as sustaining donors to AMSAT Project Funds, will be eligible to receive additional benefits. Application forms are available from the AMSAT Office.

Primary and secondary school students are eligible for membership at one-half the standard yearly rate. Post-secondary school students enrolled in at least half time status shall be eligible for the student rate for a maximum of 6 post-secondary years in this status. Contact Martha at the AMSAT Office for additional student membership information. And with that, please keep in mind the August 16 - 17 temperatures measured by NASA's Curiosity rover reported that ground temperature ranged between minus 131.8° F to +37° F; air temperature

in Gale Crater ranged between minus 103° F and +28° F. That's what

being 50% farther from the sun than Earth will do for you.

73,
This week's ANS Editor,
JoAnne Maenpaa, K9JKM

124. Weekly Highlights of Solar and Geomagnetic Activity, 20 - 26 August 2012

Newsgroup: rec.radio.amateur.space
Date: 2012-08-27 15:30:06 UTC
From: SWPC.Webmaster@noaa.gov
Message-ID: <20120827153001.A649033C94@panix2.panix.com>
Source record: 224
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.dx,rec.radio.amateur.space,rec.radio.shortwave,rec.radio.info

```
:Product: Weekly Highlights and Forecasts
:Issued: 2012 Aug 27 0630 UTC
# Prepared by the US Dept. of Commerce, NOAA, Space Weather Prediction Center
# Product description and SWPC contact on the Web
# http://www.swpc.noaa.gov/weekly.html
#
# Weekly Highlights and Forecasts
#
Highlights of Solar and Geomagnetic Activity
20 - 26 August 2012

Solar activity was very low until 25 and 26 August. The largest
flare of the reporting period was a C1/Sf at 25/0236 UTC from Region
1554 (N16, L=215, class/area Dsi/170 on 25 August). No coronal mass
ejections observed during the reporting period were Earth-directed.

No proton events were observed at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit was at
high levels from 21 - 24 August. Moderate levels were observed 20
August and again from 25 - 26 August.

Geomagnetic field activity was mostly quiet to unsettled with an
isolated active period mid-day on 26 August. At the beginning of the
period, solar wind speed, measured at the ACE spacecraft, indicated
the presence of a coronal hole high speed stream (CH HSS). Solar
wind decreased steadily from approximately 600 km/s to 400 km/s by
early on 22 August. Quiet to unsettled conditions were observed on
20 - 21 August. By mid-day on 24 August, the phi angle changed from
a positive to negative orientation indicating a solar sector
boundary crossing. Solar wind speed began to increase early on 25
August from approximately 400 km/s to 610 km/s as another CH HSS
moved into geoeffective position. Solar wind speed increased once
more mid-day on 26 August and ended the period around 700 km/s.
Conditions were quiet on 22 August. Conditions remained at quiet to
unsettled levels from 23 August until mid-day on 26 August as an
isolated active period was observed.

Forecast of Solar and Geomagnetic Activity
27 August - 22 September 2012

Solar activity is expected to be at very low to low levels with a
slight chance for M-class activity through the forecast period.

No proton events are expected at geosynchronous orbit.
```

The greater than 2 MeV electron flux at geosynchronous orbit is expected to be at high levels on 29 - 30 August, 09 - 10 September, 16 - 17 September, and again on 22 September due to effects from coronal hole high speed streams.

Geomagnetic field activity is expected to be mostly quiet to unsettled until 15 September as a recurrent coronal hole high speed stream moves into a geoeffective position. Unsettled to active conditions are expected on 15 - 16 September. Conditions are expected to be mostly quiet to unsettled again from 17 September through 21 September. Another recurrent coronal hole high speed stream is expected to become geoeffective on 22 September causing unsettled to active conditions.

125. WSR-240 AMSAT Weekly Satellite Report

Newsgroup: rec.radio.amateur.space
Date: 2012-08-31 01:45:18 UTC
From: JoAnne Maenpaa <k9jkm@comcast.net>
Message-ID: <002d01cd8719$8b1713d0$a1453b70$@net>
Source record: 225
Cross-posted to: rec.radio.amateur.space,rec.radio.info

```
This report is organized into three (3) parts.
Part 1 (S1) - operational analog amateur satellites
Part 2 (S2) - operational digital amateur satellites
Part 3 (S3) - non - operational satellites

SB SAT @ AMSAT W8ISS $WSR-240.S1
WSR 240 Part 1 08/27/2012

AMSAT NEWS SERVICE BULLETIN 240.S1
FROM AMSAT HQ SILVER SPRING, MD, August 27, 2012
TO ALL RADIO AMATEURS
BID: $WSR-240.S1

PW-Sat
Catalog Number: 38083 (?)
Launch Date: February 13, 2012
Launch Site: Kourou, French Guiana

Status: On Orbit

Uplink: 435.020 MHz FM
Downlink: 145.900 MHz DSB

Beacon:

Callsign:

URL:

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=132
[07162012]
=====
DO-64 Delfi-C3
Catalog number: 32789
Launch Date: April 28, 2008 0354z
Launch site: Satish Dhawan Space Centre, India

Status: Operational
Current Mode: Science Mode - Beacon ONLY

Telemetry: 145.870 MHz

Downlink: 145.880 to 145.920 MHz
Uplink: 435.530 to 435.570 MHz

Delfi-C3 web page: http://www.delfic3.nl/
```

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=68
[02092011]
=====
VO-52 HAMSAT
Catalog number: 28650
Launch Date: May 05, 2005 0444z
Launch site: Satish Dhawan Space Centre, India

Status: Operational
Current Mode: U/v - Dutch Transponder

Frequencies:
Indian Transponder:
Uplink: 435.220 to 435.280 MHz LSB/CW
Downlink: 145.930 to 145.870 MHz USB/CW

Dutch Transponder:
Uplink: 435.225 to 435.275 MHz LSB/CW
Downlink: 145.925 to 145.875 MHz USB/CW

Indian Beacon: 145.9360 MHZ CW
Dutch Beacon: 145.860 MHz 12WPM with CW message

Mode and Antenna Polarization:
V: LHCP
U: RHCP

Official Webpage: http://www.amsatindia.org/hamsat.htm

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=30

To know what transponder is switched on please listen for the beacon
that is active. Each transponder has a different beacon.
[03232012]
=====
SO-50 SAUDISAT-1C
Catalog number: 27607
Launch date: December 20, 2002 1700z
Launch site: Baikonur, Kazakhstan

Status: Operational

Current Mode: V/u

Uplink: 145.850 MHz FM - 67.0 Hz PL tone
Downlink: 436.795 MHz

Mode and Antenna Polarization:
V: Linear
U: Linear

Official Webpage: http://saudisat.kacst.edu.sa/index.shtml
(not up and running currently)

To switch the transmitter on, you need to send a CTCSS tone of 74.4
Hz. The order of operation is thus: (allow for Doppler as necessary):
1) Transmit on 145.850 MHz with a tone of 74.4 Hz to arm the 10 minute
timer on board the spacecraft.
2) Now transmit on 145.850 MHz (FM Voice) using 67.0 Hz to PT the re-
peater on and off within the 10 Minute window.
3) Sending the 74.4 tone again within the 10 minute window will reset
the 10 minute timer.
[02092011]
=====
FO-29 JAS-2
Catalog number: 24278
Launch Date: August 17, 1996

Status: Operational
Current Mode: V/u (Mode JA)

Voice/CW (Mode JA)
Uplink: 145.90 to 146.00 MHz CW/LSB
Downlink: 435.80 to 435.90 MHz CW/USB
Beacon: 435.795 MHz

Digital Mode JD
Uplinks: 145.850 MHz FM
145.870 MHz FM
145.910 MHz FM
Downlink: 435.910 MHz 1200-baud BPSK or 9600-baud FSK
Callsign: 8J1JCS
Digitalker: 435.910 MHz

Mode and Antenna Polarization:
V: RHCP
U: RHCP

For current operational schedule for FO-29:
http://www.ne.jp/asahi/m-arai/gkz/satinfo/fo29e.htm

JARL English webpage:
http://www.jarl.or.jp/English/5_Fuji/ejasmenu.htm

AMSAT-NA Webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID
=5&retURL=/satellites/status.php

Mineo Wakita, JE9PEL, has created a simple decoder program for FO29's
CW telemetry downlink: http://www.ne.jp/asahi/hamradio/je9pel/
fo29cwts.htm
[01122012]
=====
AO-27 AMRAD
Catalog number: 22825
Launch date: September 26, 1993 0140z
Launch site: Kourou, French Guiana

Status: Operational

Current Mode: V/u

Uplink: 145.850 MHz FM
Downlink: 436.797 MHz FM

Mode and Antenna Polarization:
V: Linear
U: Linear

Official Webpage: http://www.ao27.org
[02092011]
=====
AO-7 AMSAT OSCAR 7
Catalog number: 07530
Launch Date: November 15, 1974
Launch site: Vandenberg AFB, California, USA

Status: Operational

Current Mode: Alternating between Mode A and B every 24 hours

Uplink: 145.850 to 145.950 MHz CW/USB Mode A
432.125 to 432.175 MHz CW/LSB Mode B
Downlink: 29.400 to 29.500 MHz CW/USB Mode A (1W PEP)
145.975 to 145.925 MHz CW/USB Mode B (8W PEP)
145.975 to 145.925 MHz CW/USB Mode C (2W PEP)
Beacons: 29.502 MHz CW
145.972 MHz CW
435.100 MHz CW
2304.100 MHz CW

Official Webpage:
http://www.amsat.org/amsat-new/satellites/sat_summary/ao7.php
[04242012]
=====
INTERNATIONAL SPACE STATION (ISS) - ARISS
Catalog number: 25544
Launch date: November 20, 1998 0640z (ZARYA module)
Launch sites: Baikonur, Kazakhstan
Kourou, French Guiana
Uchinoura Space Center, Japan
Kennedy Space Center, Titusville, Florida, USA

Status: Operational

Current Active Modes: FM Repeater - OFF
Voice - V/v
BBS - OFF
2m APRS - OFF
70cm APRS - ON
70cm Digi - ON
SSTV - OFF

Expedition 32 Crew (July 2012 - November 2012):
Commander: Gennady Padalka RN3DT
Flight Engineer: Joe Acaba KE5DAR
Flight Engineer: Sergei Revin RN3BS
Flight Engineer: Sunita Williams KD5PLB
Flight Engineer: Yuri Malenchenko RK3DUP
Flight Engineer: Akihiko Hoshide KE5DNI

Available Modes and Frequencies:
Digital/APRS:
Worldwide 2m packet uplink: 145.825 MHz FM 1k2
Worldwide 2m packet downlink: 145.825 Mhz FM 1k2
Worldwide 70cm packet uplink: 437.550 Mhz FM 1k2
Worldwide 70cm packet downlink: 437.550 Mhz FM 1k2

Voice:
Region 1 voice uplink: 145.200 MHz FM
Region 2/3 voice uplink: 144.490 MHz FM
Worldwide downlink: 145.800 MHz FM

Crossband Repeater:
Repeater Uplinks: 1269.650 MHz FM
437.800 MHz FM
145.990 MHz FM - 67.0 PL (Kenwood)
Repeater Downlink: 145.800 MHz FM
437.800 MHz FM (Kenwood)

SSTV Robot 36:
Downlink: 145.800 MHz FM

Mode and Antenna Polarization:
V: Linear
U: Linear

Callsigns:
Belgian: OR4ISS
German: DP0ISS
Russian: RS0ISS
RZ3DZR
United States: NA1SS
2m Packet Mailbox: RS0ISS-11
2m Digipeater alias: ARISS
70cm Packet Mailbox: RS0ISS-1
70cm Digipeater callsign: RS0ISS
70cm Digipeater alias: ARISS

Official ARISS Webpage: http://www.rac.ca/ariss
ISS Fan Club Webpage: http://www.issfanclub.com
APRS tracking page: http://www.ariss.net/

ISS Daily Crew Schedule: http://spaceflight.nasa.gov/station/timelines
Remember that the crew operates on UTC time. Also, all of the time
line is NOT translated from Russian and posted.
[08062012]

NNNN
/EX

SB SAT @ AMSAT W8ISS $WSR-240.S2
WSR 240 Part 2 08/27/2012

AMSAT NEWS SERVICE BULLETIN 240.S2
FROM AMSAT HQ SILVER SPRING, MD, August 27, 2012
TO ALL RADIO AMATEURS
BID: $WSR-240.S2

RS-40 MiR (Yubileiny-2)
Catalog Number: 38735
Launch Date: July 28, 2012

Status: On Orbit

Uplink:
Downlink(s): 435.265 MHz
435.365 MHz

Beacon:

Callsign:

URL:
[08272012]
=====
HORYU-II
Catalog number: 38340
Launch Date: May 17, 2012

Status: On Orbit

Uplink: 145.??? MHz
Downlink: 437.375 MHz CW/AX25/FSK

Beacon: 437.375 MHz CW

Callsign: JG6YBW

URL:

IARU Coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=216
[05282012]
=====
XaTcobeo
Catalog Number: 38082
Launch Date: Febrauary 13, 2012
Launch Site: Kourou, French Guiana

Status: Operational

Uplink:
Downlink: 437.365 MHz FFSK with AX.25

Beacon:

Callsign:

URL:

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=135
[03162012]
=====
UniCubeSat
Catalog Number: 38085(?)
Launch Date: Febrauary 13, 2012
Launch Site: Kourou, French Guiana

Status: Operational

Uplink:
Downlink: 437.305 MHz 9k6 bps GMSK

Beacon:

Callsign:

URL:
http://www.gaussteam.com/index.php?option=com_content&view=article&id=96:uni
cu
besat&catid=36:unicubesat&Itemid=183

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=133
[08272012]
=====
Robusta
Catalog Number: 38083(?)
Launch Date: Febrauary 13, 2012
Launch Site: Kourou, French Guiana

Status: On Orbit

Uplink:
Downlink: 437.325 MHz 1k2 FM telemetry (data every 3 min, 20 sec. burst)

Beacon:

Callsign:

URL:

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=122
[08272012]
=====

MO-72 MaSat-1
Catalog Number: 38081
Launch Date: Febrauary 13, 2012
Launch Site: Kourou, French Guiana

Status: Operational

Uplink:
Downlink: 437.345 MHz GFSK 625/1250 bps
437.345 MHz CW

Beacon:

Callsign:

URL:

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=126
[03232012]
=====
Goliat
Catalog Number: 38084(?)
Launch Date: Febrauary 13, 2012
Launch Site: Kourou, French Guiana

Status: Operational

Uplink:
Downlink: 437.485 MHz 1k2 AFSK

Beacon:

Callsign:

URL:

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=98
[08272012]
=====
E-St@r
Catalog Number: 38079
Launch Date: Febrauary 13, 2012
Launch Site: Kourou, French Guiana

Status: On Orbit

Uplink:
Downlink: 437.445 MHz 1k2 bps AFSK

Beacon:

Callsign:

URL:

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=130
[07302012]
=====
ALMASat-1
Catalog Number: 38078
Launch Date: Febrauary 13, 2012
Launch Site: Kourou, French Guiana

Status: On Orbit

Uplink:
Downlink: 437.465 MHz 1k2 bps FSK
2407.850 MHz

Beacon:

Callsign:

URL:

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=39
[02212012]
=====
RS-39 Chibis-M
Catalog Number: 38051
Launch Date: October 30, 2011 10:11:00 UTC
Launch site: Tyuratam (Baikonur Cosmodrome), Kazakhstan

Status: Operational

Uplink:
Downlink:

Beacon: 435.315 MHz CW
435.215 MHz CW

Callsign:

URL:

IARU coordination status page:
[07302012]
=====
JUGNU
Catalog Number: 37839
Launch Date: October 12, 2011 05:30:00 UTC
Launch site: Satish Dhawan Space Centre, India

Status: On Orbit

Uplink: 145.??? MHz 1k2 (mode?)
Downlink: 437.505 MHz 9k6 (mode?)

Beacon: 437.275 MHz 15 wpm (?) CW

Callsign:

URL: http://www.iitk.ac.in/me/jugnu/index.htm

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=160
[07092012]
=====
SRMSAT
Catalog Number: 37841
Launch Date: October 12, 2011 05:30:00 UTC
Launch site: Satish Dhawan Space Centre, India

Status: On Orbit

Uplink: 145.900 MHz 1k AX.25 (speed?)
Downlink: 437.500 MHz 2k4 AX.25

Beacon: 437.425 MHz 12 wpm CW

Callsign:

URL: http://srmsat.in/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=181
[07092012]
=====
HRBE (E1P Explorer 1 [Prime] CubeSat (E1P-U2))
Catalog Number: 37855
Launch Date: October 28, 2011
Launch site: Vandenberg Air Force Base, California, USA

Status: On Orbit

Uplink: 437.305 MHz (???)
Downlink: 437.505 MHz AX.25 (SSB?)

Beacon:

Callsign:

URL: http://ssel.montana.edu/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=116
[01122012]
=====
M-Cubed
Catalog Number: 37855
Launch Date: October 28, 2011
Launch site: Vandenberg Air Force Base, California, USA

Status: On Orbit

Uplink:
Downlink: 437.485 MHz AX.25

Beacon:

Callsign:

URL: http://umcubed.org/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=215
[01122012]
=====
RAX-2
Catalog Number: 37853
Launch Date: October 28, 2011
Launch site: Vandenberg Air Force Base, California, USA

Status: Operational

Uplink:
Downlink: 437.345MHz 9k6 GMSK

Beacon:

Callsign:

URL: http://rax.engin.umich.edu//

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=221
[03232012]
=====
AO-71 AubieSat-1
Catalog Number: 37854
Launch Date: October 28, 2011
Launch site: Vandenberg Air Force Base, California, USA

Status: On Orbit

Uplink:
Downlink: 437.475 MHz 1k2 AX.25

Beacon: 437.475 MHz CW

Callsign: KI4NQO

URL: http://www.space.auburn.edu/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=148
[12262011]
=====
O/OREOS
Catalog Number: 37224
Launch Date: November 20, 2010

Launch site: Kodiak Launch Complex, Alaska, USA

Status: On Orbit

Uplink:
Downlink: 437.035 MHZ AX.25

Beacon:

Callsign:

URL: http://www.ooreos.org/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=146
[02092011]
=====
Rax-1 Radio Aurora Explorer
Catalog Number: 37223
Launch Date: November 20, 2010
Launch site: Kodiak Launch Complex, Alaska, USA

Status: On Orbit

Uplink:
Downlink: 437.505 MHz 9k6 GMSK

Beacon:

Callsign: RAX-1

URL: http://rax.engin.umich.edu/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=165
[02092011]
=====
FO-69 Fastrac-1 Sara Lily
Catalog Number: 37227
Launch Date: November 20, 2010
Launch site: Kodiak Launch Complex, Alaska, USA

Status: Operational

Uplink 1: 145.980 MHz 1k2 baud
Uplink 2: 145.825 MHz 1k2 baud
Downlink: 437.345 MHz 1k2 and 9k6 baud

Beacon: 437.435 MHz 1k2 AX.25

Callsign: Fast1

URL: http://fastrac.ae.utexas.edu/index.php

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=83

[07052011]
=====
FO-70 Fastrac-2 Emma
Catalog Number: 37380
Launch Date: November 20, 2010
Launch site: Kodiak Launch Complex, Alaska, USA

Status: Operational

Uplink 1: 435.025 MHz 1k2 baud
Uplink 2: 437.435 MHz 9k6 baud
Downlink: 145.825 MHz 1k2 and 9k6 baud

Beacon: 145.825 MHz 1k2 AX.25

Callsign: Fast2

URL: http://fastrac.ae.utexas.edu/index.php

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=84
[12162011]
=====
StudSat
Catalog Number: 36796
Launch Date: July 12, 2010 0352z
Launch site: Satish Dhawan Space Centre, India

Status: On Orbit

Uplink: 437.505MHz, 9600bps FSK
Downlink: 437.505MHz, 9600bps FSK
Beacon : 437.505MHz, 20bps ASK

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=164
[02092011]
=====
TIsat-1
Catalog Number: 36799
Launch Date: July 12, 2010 0352z
Launch site: Satish Dhawan Space Centre, India

Status: On orbit

Callsign: HB9DE

Uplink: 145.980MHz FM, AFSK
Downlink: 437.305MHz FM, AFSK
Beacon: 437.305MHz CW

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=118
[02092011]

=====
SwissCube
Catalog Number: 35932
Launch Date: September 23, 2009 0621z
Launch site: Satish Dhawan Space Centre, India

Status: Operational

Callsign: HB9EG

Beacon(100mw): 437.5050MHz CW
Beacon(1w): 437.5050MHz FSK 1k2bps

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=109
[02092011]
=====
UWE-2
Catalog Number: 35934
Launch Date: September 23, 2009 0621z
Launch site: Satish Dhawan Space Centre, India

Status: In Orbit

Beacon(500mw): 437.3850 MHz AFSK 1k2bps
437.3850 MHz FSK 9k6bps

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=110
[02092011]
=====
ITUpsAT1
Catalog Number: 35935
Launch Date: September 23, 2009 0621z
Launch site: Satish Dhawan Space Centre, India

Status: Operational

Beacon(100mw): 437.325MHz CW
Beacon(1w): 437.325MHz 19k2bps

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=113
[02092011]
=====
BEESAT
Catalog Number: 35933
Launch Date: September 23, 2009 0621z
Launch site: Satish Dhawan Space Centre, India

Status: Operational

Callsign: DP0BEE

Beacon(100mw): 436.000MHz CW
Beacon(500mw): 436.000MHz GMSK 4k8bps
Beacon(500mw): 436.000MHz GMSK 9k6bp
[02092011]
=====
CP-6
Catalog Number: 35003
Launch Date: May 19, 2009 2355z
Launch site: Wallops Island, Virginia, USA

Status: Operational

Downlink: 437.365 MHz 1k2 AFSK

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=121
[07302012]
=====
HAWKSAT 1
Catalog number: 35004
Launch Date: May 19, 2009 2355z
Launch site: Wallops Island, Virginia, USA

Status: operational

Downlink: 437.345 MHz ?

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=105
[07302012]
=====
Pharmasat
Catalog Number: 35002
Launch Date: May 19, 2009 2355z
Launch site: Wallops Island, Virginia, USA

Status: Operational

Downlink: 437.465 MHz 1k2 AFSK

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=94
[02092011]
=====
ANUSAT
Catalog Number: 34808
Launch Date: April 20, 2009 0115z
Launch Site: Satish Dhawan Space Centre, India

Status: ?

Downlink: 435.000 MHz
Uplink: 145.800 MHz

Telemetry: 137.400 MHz
[02092011]
=====
SOHLA-1 (ASTRO TECH.)
Catalog Number: 33496
Launch Date: January 23, 2009 0354z
Launch site: Tanegashima Space Center, Japan

Status: Operational

Proposed Frequencies and Modes:
Downlink: 437.505 MHz AFSK/CW
Beacon: 437.505 MHz AFSK/CW

Callsign:

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=101
[02092011]
=====
KAGAYAKI (Solan Co.)
Catalog Number: 33495
Launch Date: January 23, 2009 0354z
Launch site: Tanegashima Space Center, Japan

Status: In Orbit

Downlink: 437.375 MHZ FSK9k6/CW
Beacon: 437.375 MHz FSK9k6/CW

IARU coordination status page:

AMSAT-NA webpage:

[02092011]
=====
STARS (Kagawa Univ.) (Twin Satellites)
Catalog Number: 33498
Launch Date: January 23, 2009 0354z
Launch site: Tanegashima Space Center, Japan

Status: Operational ?

Downlinks: 437.485 MHz FM/CW
437.465 MHz FM/CW
Beacons: 437.305 MHz FM/CW
437.275 MHz FM/CW

Callsigns: JR5YBN
JR5YBO

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=99

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID=121&retURL

=/satellites/status.php
[02092011]
=====
KKS-1 (Tokyo MCIT)
Catalog Number: 33499
Launch Date: January 23, 2009 0354z
Launch site: Tanegashima Space Center, Japan

Status: Operational

Downlink: 437.455 MHz AFSK/CW
Beacon: 437.385 MHz AFSK/CW

Callsign: JQ1YYY

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=107

AMSAT-NA webapge:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID=120&retURL
=/satellites/status.php
[20092011]
=====
PRISM (Tokyo Univ.)
Catalog Number: 33493
Launch Date: January 23, 2009 0354z
Launch site: Tanegashima Space Center, Japan

Status: Operational ?

Downlink: 437.425 MHz AFSK/GMSK/CW
Beacon: 437.250 MHz AFSK/GMSK/CW

Callsign: JQ1YCX

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=97

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID=119&retURL
=/satellites/status.php
[02092011]
=====
RS-30 Radio Sputnik 30 (Yubileiny)
Catalog Number: 32953
Launch Date: May 23, 2008 1520z
Launch site: Plesetsk Missile and Space Complex, Russia

Status: Operational

Curent Modes: Telemetry
Audio
Images

Downlinks: 435.315 MHz
435.215 MHz

AMSAT-NA website:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID=115&ret
URL=/satellites/status.php

Official website:
http://www.npopm.com/?cid=leoca&caid=43
[02092011]
=====
CanX-2
Catalog number: 32790
Launch Date: April 28, 2008 0354z
Launch site: Satish Dhawan Space Centre, India

Status: Operational in range of ground station only

Downlink: 437.478 MHz GFSK

For the latest project status update please visit the Can X-2 web
page: http://www.utias-sfl.net/nanosatellites/CanX2/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=46
[02092011]
=====
AAUSAT-II
Catalog number: 32788
Launch Date: April 28, 2008 0354z
Launch site: Satish Dhawan Space Centre, India

Status: Operational

Downlink: 437.425 MHz 1k2 baud packet

For the latest project status update please visit the AAUSAT-II web
page:
http://www.aausatii.aau.dk/homepage/index.php?language=en&page=home

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=60
[02092011]
=====
CO-65 CUTE-1.7+APD II
Catalog number: 32785
Launch Date: April 28, 2008 0354z
Launch site: Satish Dhawan Space Centre, India

Status: Operational

Downlink: 437.475 MHz 9k6 Packet
Uplink: 1267.600 Mhz

Telemetry Beacon:
Downlink: 437.2750 MHz CW

For the latest project status update please visit the Cute-1.7+APD II
web page: http://lss.mes.titech.ac.jp/ssp/cute1.7/index_e.html

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=78

Command Station blog website:
http://lss.mes.titech.ac.jp/ssp/cute1.7/blog/

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID=112&retURL
=/satellites/status.php
[03232012]
=====
Compass-1
Catalog number: 32787
Launch Date: April 28, 2008 0354z
Launch site: Satish Dhawan Space Centre, India

Status: Operational

Current Mode: dependant on last received command

Uplink: 145.980 MHz FM
Downlink: 437.275 Mhz CW
437.405 MHz Packet

For the latest project status update please visit the Compass 1 web
page: http://www.raumfahrt.fh-aachen.de/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=52

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID=114&retURL
=/satellites/status.php
[06162011]
=====
CO-66 Seeds II
Catalog number: 32791
Launch Date: April 28, 2008 0354z
Launch site: Satish Dhawan Space Centre, India

Status: Operational

Downlink: 437.485 MHz

Callsign: JQ1YGU

For the latest project status update please visit the Seeds 2 web
page: http://cubesat.aero.cst.nihon-u.ac.jp/english/seeds_2_e.html

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=36

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID=113&retURL
=/satellites/status.php
[073092011]
=====
CAPE-1
Catalog Number: 31130
Launch Date: April 17,2007 0702z
Launch site: Baikonur, Kazakhstan

Status: Intermittent

Current Mode: /u

TLM Downlink: 435.245 MHz 9600 bs FSK AX.25
CW Beacon: 435.245 MHz CW

Callsign: K5USL

TLM and CW interchange every 30 seconds.

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID=94&retURL=
/satellites/status.php

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=72
[02092011]
=====
CP3
Catalog Number: 31129
Launch Date: April 17,2007 0702z
Launch site: Baikonur, Kazakhstan

Status: Operational

Current Mode: /u

Downlink: 436.845 MHz 1200 bps AFSK AX.25

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=74
[02092011]
=====
CO-58 CubeSat XI-V
Catalog number: 28895
Launch Date: October 27, 2005 0652z
Launch site: Plesetsk Missile and Space Complex, Russia

Status: Operational - CW Beacon only

Current Mode: /u

Telemetry Downlink: 437.4250 MHz AFSK 1200bps using AFK protocol
Beacon: 437.2750 MHz CW

Callsign: JQ1YGW

Official Webpage: http://www.space.t.u-tokyo.ac.jp/cubesat/mission/V/

Pictures received by Mineo Wakita - JE9PEL:
http://www.ne.jp/asahi/hamradio/je9pel/xivpicte.htm

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=37
[02092011]
=====
CO-57 CubeSat XI-IV
Catalog number: 27848
Launch date: June 30, 2003 1415z
Launch site: Plesetsk Missile and Space Complex, Russia

Status: ?????

Current Mode: /u

Beacon: 436.8475 MHz CW
Telemetry : 437.4900 MHz AFSK 1200 BPS

Callsign: JQ1YGW

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID=96&retURL
=/satellites/status.php

Official Webpage: http://www.space.t.u-tokyo.ac.jp/cubesat/mission/V/
[02092011]
=====
QuakeSat
Catalog Number: 27845
Launch Date: June 30, 2003 1415z
Launch site: Plesetsk Missile and Space Complex, Russia

Status: Telemetry only

Current Mode: 9600 baud data packet

Mode U packet
Downlink: 436.675 MHz 9k6 BPS

Quakesat webpage:
http://www.quakefinder.com/services/quakesat-ssite/
[02252011]
=====
CO-55 Cute-1.7+APD II
Catalog Number: 27844
Launch date: June 30, 2003 1415z
Launch site: Plesetsk Missile and Space Complex, Russia

Status: Operational

Current Mode: CW downlink worldwide
AX25 Packet with uplink command over Japan only

Mode U Telemetry
Downlink: 437.4000 MHz AFSK 1200 BPS

Mode U TLM Beacon
Downlink: 436.8375 MHz CW

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID=69&retURL
=/satellites/status.php

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=78
[02092011]
=====
NO-44 PCSAT
Catalog number: 26931
Launch Date: September 30, 2001 0240z
Launch site: Kodiak Launch Complex, Alaska, USA

Status: Telemetry only

Current Mode: V/v

General Usage Uplink/Downlink: 145.827 MHz 1200 Baud
Special Usage Downlink: 144.390 Mhz 1200 Baud

PCSAT APRS page: http://pcsat.aprs.org

aprstlm Telemetry Decoder program:
http://www.xciv.org/~iain/aprstlm/v1.2/
[02092011]
=====
RS-22 RADIO SPORT 22 (MOZHAYETS 4)
Catalog number: 27939
Launch Date: September 27, 2003 0612z
Launch site: Plesetsk Missile and Space Complex, Russia

Status: Operational - 70cm cw only

Current Mode: /u

CW Beacon - 435.352 MHz
145.818 MHz

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID=76&retURL
=/satellites/status.php
[02092011]
=====
LO-19 LUSAT
Catalog number: 20442

Launch date: January 22, 1990
Launch site: Kourou, French Guiana

Status: CW Beacon only

Uplinks: 145.840 MHz 1200-baud Manchester FSK
145.860 MHz 1200-baud Manchester FSK
145.880 MHz 1200-baud Manchester FSK
145.900 MHz 1200-baud Manchester FSK

CW downlink: 437.125 MHz

Digital downlink: 437.150 MHz SSB (RC-BPSK 1200-baud PSK)

Broadcast Callsign: LUSAT-11
BBS: LUSAT-12

General information and telemetry samples can be found at:
www.telecable.es/personales/ea1bcu
[02092011]
=====
UO-11 OSCAR-11
Catalog number: 14781
Launch Date: March 1, 1984
Launch site: Vandenburg AFB, California, USA

Status: Operational ?

Current Mode: /v

Telemetry Downlink: 145.825 MHz FM 1200 AFSK
UHFBeacon: 435.025 MHz
Mode-S Beacon: 2401.500 MHz

Mode and Antenna Polarization:
V: RHCP
S: LHCP

Webpage: http://www.users.zetnet.co.uk/clivew/
MPEG3 files: http://www.ne.jp/asahi/hamradio/je9pel/uo11tlme.htm
[07052011]
=====
INTERNATIONAL SPACE STATION (ISS) - ARISS
Catalog number: 25544
Launch date: November 20, 1998 0640z (ZARYA module)
Launch sites: Baikonur, Kazakhstan
Kourou, French Guiana
Uchinoura Space Center, Japan
Kennedy Space Center, Titusville, Florida, USA

Status: Operational

Current Active Modes: FM Repeater - OFF
Voice - V/v

BBS - U/u
2m APRS - OFF
70cm APRS - ON
70cm Digi - ON
SSTV - OFF

Expedition 32 Crew (July 2012 - November 2012):
Commander: Gennady Padalka RN3DT
Flight Engineer: Joe Acaba KE5DAR
Flight Engineer: Sergei Revin RN3BS
Flight Engineer: Sunita Williams KD5PLB
Flight Engineer: Yuri Malenchenko RK3DUP
Flight Engineer: Akihiko Hoshide KE5DNI

Available Modes and Frequencies:
Digital/APRS:
Worldwide 2m packet uplink: 145.825 MHz FM 1k2
Worldwide 2m packet downlink: 145.825 Mhz FM 1k2
Worldwide 70cm packet uplink: 437.550 Mhz FM 1k2
Worldwide 70cm packet downlink: 437.550 Mhz FM 1k2

Voice:
Region 1 voice uplink: 145.200 MHz FM
Region 2/3 voice uplink: 144.490 MHz FM
Worldwide downlink: 145.800 MHz FM

Crossband Repeater:
Repeater Uplinks: 1269.650 MHz FM
437.800 MHz FM
145.990 MHz FM - 67.0 PL (Kenwood)
Repeater Downlink: 145.800 MHz FM
437.800 MHz FM (Kenwood)

SSTV Robot 36:
Downlink: 145.800 MHz FM

Mode and Antenna Polarization:
V: Linear
U: Linear

Callsigns:
Belgian: OR4ISS
German: DP0ISS
Russian: RS0ISS
RZ3DZR
United States: NA1SS
2m Packet Mailbox: RS0ISS-11
2m Digipeater alias: ARISS
70cm Packet Mailbox: RS0ISS-1
70cm Digipeater callsign: RS0ISS
70cm Digipeater alias: ARISS

Official ARISS Webpage: http://www.rac.ca/ariss
ISS Fan Club Webpage: http://www.issfanclub.com
APRS tracking page: http://www.ariss.net/

ISS Daily Crew Schedule: http://spaceflight.nasa.gov/station/timelines
Remember that the crew operates on UTC time. Also, all of the time
line is NOT translated from Russian and posted.
[08062012]
NNNN
/EX

SB SAT @ AMSAT W8ISS $WSR-240.S3
WSR 240 Part 3 08/27/2012

AMSAT NEWS SERVICE BULLETIN 240.S3
FROM AMSAT HQ SILVER SPRING, MD, August 27, 2012
TO ALL RADIO AMATEURS
BID: $WSR-240.S3

THE FOLLOWING ARE IN ORBIT BUT ARE NON-OPERATIONAL AT THIS TIME:

NANOSAIL-D
Catalog Number: 37361
Ejection Date: January 17, 2011

Status: Non - Operational

Downlink: 437.270 MHz AX.25

URL: http://nanosaild.engr.scu.edu/dashboard.htm

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=115
[07302012]
=====
HO-68 HOPE-1 (CAS-1) (XW-1)
Catalog Number: 36122
Launch Date: December 15, 2009 0231z
Launch site: Taiyuan Space Center, PRC

Status: Telemetry only

Callsign:
Broadcast: BJ1SA-11
BBS: BJ1SA-12

Uplinks: 145.8250 MHz FM, PL 67.0 Hz.
145.9250 - 145.9750 MHz SSB/CW
145.8250 MHz AFSK 1200 BPS
Downlinks: 435.6750 MHz FM
435.7650 - 435.7150 MHz SSB/CW
435.6750 MHz AFSK 1200 BPS

Beacon: 435.7900 MHz CW

Mode and Antenna Polarization:
V: LHCP 2.0dBi max
U: RHCP 3.0dBi max

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=108

For more information about XW-1 (CAS-1):
http://
[04302012]
=====
SO-67 SumbandilaSat
Catalog Number: 35870
Launch Date: September 17, 2009 1555z
Launch site: Baikonur, Kazakhstan

Status: Non - Operational

Callsign: ZS0SUM

Uplink: 145.875MHz FM tone 233.6 Hz
Downlink: 435.345MHz FM

Mode and Antenna Polarization:
V: Linear
U: Linear

For more information about SO-67:
http://www.amsatsa.org.za/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=88
[01272012]
=====
CP4
Catalog Number: 31132
Launch Date: April 17, 2007

Status: Non-Operational

Current Mode: /u

TLM Downlink: 437.325 MHz 1200 bps FSK AX.25
CW Beacon: 437.325 MHz CW

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=79
[09062010]
=====
LIBERTAD-1
Catalog Number: 31128
Launch Date: April 17, 2007

Status: Non-Operational

Current Mode: V/u APRS Packet ax25

Callsign: 5K3L

Uplink: 145.825 MHz 1200 AFSK ax25 APRS
Downlink: 437.399 MHz 1200 AFSK ax25 APRS

Telemetry Beacon: 437.4050 MHz 1200 AFSK ax25

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=76
[09062010]
=====
PO-63 PEHUENSAT-1
Catalog Number: 29712
Launch Date: January 10, 2007

Status: Non-Operational

Current Mode: V/v

Uplink/Downlink: 145.825 Mhz FM
Voice Recorder: 145.825 Mhz FM

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=51
[09062010]
=====
NCUBE-2
Catalog number: 28897
Launch Date: October 27, 2005

Status: Still attached to XO-53 (SSETI)?

Proposed Callsign: TBA
Proposed Transmit Frequency: 437.305
2407.250

Official Website: http://www.ncube.no

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=24
[09062010]
=====
XO-53 SSETI
Catalog number: 28894
Launch Date: October 27, 2005

Status: Non-operational

Voice Uplink: 437.250 MHz FM 67Hz CTCSS
Voice Downlink: 2401.835 MHz FM
Packet Up/Downlink: 437.250 MHz 9k6 packet
Packet Downlink 2401.835 MHz 38k4 packet

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=54
[09062010]

=====
UWE-1
Catalog Number: 28892
Launch Date: October 27, 2005

Status: Non-Operational

Mode U Telemetry
Downlink: 437.5050 MHz 9600 AFSK

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=53
[09062010]
=====
AO-51 ECHO
Catalog number: 28375
Launch date: June 29, 2004 0745z
Launch site: Baikonur, Kazakhstan

Status: Non - Operational

Current Mode(s):
Voice repeater: V/u
Uplink: 145.880 MHz FM
Downlink: 435.150 MHz FM

Telemetry: Recovery efforts
Downlink: 435.150MHz 9k6

Analog voice downlink: 435.300 MHz FM
435.150 MHz FM
2401.200 Mhz FM
Analog voice uplink: 145.860 MHZ FM
145.880 MHz USB
145.880 MHz FM
145.920 MHz FM
145.920 MHz FM - 67 Hz PL tone burst
1268.705 MHz FM
Digital Downlinks: 435.150 MHz FM 38k4 PBP, 1 watt output
435.150 MHz FM 9k6 Pacsat Broadcast Protocol
2401.200 MHz FM 38k4 bps, AX.25
Digital Uplink: 145.860 MHz FM 9k6 Pacsat Broadcast Protocol
1268.703 mhz FM 9k6 Pacsat Broadcast Protocol
Beacon: 435.150 MHz

Mode and Antenna Polarization:
T: Linear
V: Linear
U: TX A (usually digital)LHCP
TX B (usually analog) RHCP
L: Linear
S: Linear

Broadcast: PECHO-11
BBS: PECHO-12

Official Webpage: http://www.amsat.org/amsat-new/echo/CTNews.php

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=19
[12062011]
=====
CANX-1
Catalog Number: 27847
Launch Date: June 30, 2003

Status: Non-Operational

Downlink: 437.8800 MHz AFSK 1k2bps
[06052009]
=====
DTUSAT
Catalog Number: 27842
Launch Date: June 30, 2003

Status: Non-Operational

Current Mode: 2k4 AFSK Packet last reported

Downlink: 437.475MHz

Officail webpage: http://dtusat1.dtusat.dtu.dk/

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID=101&retURL
=satellites/all_oscars.php
[02212009]
=====
AO-49 AATiS OSCAR-49 (SAFIR-M)
Catalog number: 27605
Launch Date: December 20, 2002

Status: Non-operational.

Uplink: 435.275 MHz 1200-baud AFSK
Downlink: 145.825 MHz 9600-baud FSK
(optional voice message)

Broadcast callsign: DP0AIS

Official webpage: http://amend.gmxhome.de
[01222007]
=====
MO-46 TIUNGSAT-1
Catalog number: 26548
Launch date: September 26, 2000

Status: Telemetry only

Uplinks: 145.850 MHz
145.925 MHz 9600-baud FSK
Downlink: 437.325 MHz

Broadcast callsign: MYSAT3-11
BBS: MYSAT3-12

TiungSat-1 is Malaysia's first micro-satellite and in addition to
commercial land and weather imaging payloads offers FM and FSK
Amateur Radio communication.

TiungSat-1, named after the mynah bird of Malaysia, was developed as
a collaborative effort between the Malaysian government and Surrey
Satellite Technology Ltd.
[03302009]
=====
NO-45 SAPPHIRE
Catalog number: 26932
Launch Date: September 30, 2001

Status: Non-Operational

Downlink: 437.095 MHz 1200 baud AX-25 AFSK
Uplink: 145.945 MHz UI Digipeater
Digi Callsign: KE6QMD

Everyone is welcome to use the digipeating/APRS features of Sapphire,
as per the user service agreement located at the following URL:
http://web.usna.navy.mil/~bruninga/pcsat/contract.txt
[03132005]
=====
SO-42 SAUDISAT-1B
Catalog number: 26549
Launch date: September 26, 2000

Status: Non-Operational

Downlink: 437.075 MHz

Broadcast Callsign: SASAT2-11
BBS: SASAT2-12

Further information is available at:
http://www.amsat.org/amsat/sats/n7hpr/so42.html
[01222007]
=====
SO-41 SAUDISAT-1A
Catalog number: 26545
Launch Date: September 26, 2000

Status: Non-Operational

Uplink: 145.850 MHz
Downlink: 436.775 MHz

Broadcast Callsign: SASAT1-11
BBS: SASAT1-12

Further information is available at:
http://www.amsat.org/amsat/sats/n7hpr/so41.html
[01222007]
=====
AO-40 AMSAT OSCAR 40
Catalog number: 26609
Launch Date: November 16, 2000

Status: Non-Operational

Uplinks

V-band: 145.840 - 145.990 MHz CW/LSB
U-band: 435.550 - 435.800 MHz CW/LSB
L1-band: 1269.250 - 1269.500 MHz CW/LSB
L2-band: 1268.325 - 1268.575 MHz CW/LSB

Downlinks

S2-band: 2401.225 - 2401.475 MHz CW/USB
K-band: 24048.010 - 24048.060 MHz CW/USB
Beacon: 2401.323 MHz
24048.035 MHz

P3-D Telemetry Beacons (IHU)

BEACON General Beacon(GB) Middle Beacon(MB) Engineering Beacon(EB)
2 m none 145.898 MHz none
70cm 435.438 MHz 435.588 MHz 435.838 MHz
13cm(1) 2400.188 MHz 2400.338 MHz 2400.588 MHz
13cm(2) 2401.173 MHz 2401.323 MHz 2401.573 MHz
3cm 10450.975 MHz 10451.125 MHz 10451.375 MHz
1.5cm 24047.885 MHz 24048.035 MHz 24048.285 MHz
[07162007]
=====
OO-38 OPAL
Catalog Number: 26063
Launch Date: January 27, 2000

Status: Non-Operational

Mode U TLM Beacon
Downlink: 437.1000 MHz 9600 FSK
[08132007]
=====
UO-36 UoSAT-12
Catalog number: 25693
Launch date: April 21, 1999

Status: Unknown

Uplink: 145.960 MHz (9600-baud FSK)
Downlinks: 437.025 MHz
437.400 MHz

Broadcast Callsign: UO121-11
BBS: UO121-12

The VK5HI viewer shareware for UO-36 is available on the AMSAT-NA web
site at the following URL:
ftp://ftp.amsat.org/amsat/software/win32/display/ccddsp97-119.zip
[01222007]
=====
SO-35 SUNSAT
Catalog Number: 25636
Launch date:February 23, 1999

Status: Non-Operational

Downlink: Mode B Repeater: 436.291 MHz
Mode J Digipeater: 436.250 MHz

Uplinks: Mode B Repeater: 145.825 MHz
Mode J Digipeater: 145.825 MHz
145.900 MHz

For more information of SUNSAT vist the satellite web site:
http://esl.ee.sun.ac.za/projects/sunsat/
[01222007]
=====
PO-34 PANSAT
Catalog number: 25520
Launch date: October 30, 1998

Status: Telemetry downloads only

Uplink/downlink: 436.500 MHz

Official Webpage: http://www.sp.nps.navy.mil/pansat/
[05092004]
=====
SO-33 SEDSAT-1
Catalog number: 25509
Launch date: October 24, 1998

Status: Semi-operational

Downlink: 437.910 MHz FM (9600-baud FSK)

The satellite is not currently available for uplink transmissions and
the image and transponder recovery efforts have been unsuccessful.

For more information on SedSat-1 visit the satellite web site:
http://seds.uah.edu/projects/sedsat/sedsat.htm
[09042006]
=====

GO-32 Gurwin TechSat-1B
Catalog number: 25397
Launch Date: July 10, 1998

Status: Non-Operational

Current Modes:
Telemetry : /u

Downlink: 435.225 MHz FM (9600-baud FSK)
435.325 Mhz - Not Available - temperature problems
Uplinks: 145.850 FM
145.890 FM
145.930 FM
1269.700 FM
1269.800 FM
1269.900 FM

Broadcast Callsign: 4XTECH-11
BBS Callsign: 4XTECH-12

More information of GO-32 can be found at:
http://asri.technion.ac.il/techsat/

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID=14&retURL
=/satellites/status.php
[07172010]
=====
TO-31 TMSAT-1
Catalog number: 25396
Launch Date: July 10, 1998

Status: Non-operational

Uplink: 145.925 MHz 9600 baud FSK
Downlink: 436.925 MHz 9600 baud FSK

Broadcast callsign: TMSAT1-11
BBS: TMSAT1-12
[05012006]
=====
MO-30 UNAMSAT-2
Catalog Number: 24305
Launch Date: September 5, 1996

Status: Non-operational

Downlink: 435.1380 MHz AFSK 1200 BPS
Downlink: 435.2060 MHz AFSK 1200 BPS
Uplink: 145.8150 MHz AFSK 1200 BPS
Uplink: 145.8350 MHz AFSK 1200 BPS
Uplink: 145.8550 MHz AFSK 1200 BPS
Uplink: 145.8750 MHz AFSK 1200 BPS

[06042009]
=====
PO-28 POSAT-1
Catalog number: 22829
Launch Date: September 25, 1993

Status: Non-operational

Downlink: 429.950
Uplink: Not until handover back to Amatuer usage

Broadcast callsign: POSAT1-11
BBS callsign: POSAT1-12

AMSAT Webpage: http://www.amsat.org/amsat/sats/n7hpr/po28.html
POSAT-1 webpage:
http://www.ee.surrey.ac.uk/SSC/CSER/UOSAT/missions/posat1.html
[01012009]
=====
IO-26 ITAMSAT
Catalog number: 22826
Launch Date: September 26, 1993

Status: PSK carrier only

Current Mode:

Uplinks: 145.875 MHz FM 1200-baud
145.900 MHz FM 1200-baud
145.925 MHz FM 1200-baud
145.950 MHz FM 1200-baud

Downlink: 435.808 MHz PSK

Broadcast Callsign: ITMSAT-11
BBS: ITMSAT-12

Official webpage: http://www.itamsat.org
AMSAT Webpage: http://www.amsat.org/amsat/sats/n7hpr/io26.html
[01212007]
=====
KO-25 KITSAT
Catalog number: 22828
Launch date: September 26, 1993

Status: Non-operational

Uplink: 145.980 MHz FM 9600-baud FSK
Downlink: 436.500 MHz FM

Broadcast Callsign: HL02-11
BBS: HL02-12
[05092004]
=====

AO-24 ARSENE
Catalog Number: 22654
Launch Date: May 13, 1993

Status: Non-operational

Uplink: 435.0625 MHz FM 1k2bps AFSK
435.1125 MHz FM 1k2bps AFSK
435.1375 MHz FM 1k2bps AFSK
Downlink: 145.9750 MHz FM 1k2bps AFSK
2446.5025 MHz FM 1k2bps AFSK

Beacon: 2446.4700 MHz CW

Broadcast callsign:
BBS:
[12162009]
=====
KO-23 KITSAT
Catalog number: 22077
Launch date: August 10, 1992

Status: Non-operational

Uplink: 145.900 MHz FM (9600-baud FSK)
Downlink: 435.170 MHz FM

Broadcast Callsign: HLO1-11
BBS: HLO1-12
[01222007]
=====
UO-22 UOSAT
Catalog number: 21575
Launch date: July 17, 1991

Status: Non-Operational

Uplink: 145.900 FM 9600-baud FSK
Downlink: 435.120 MHz FM

Broadcast Callsign: UOSAT5-11
BBS: UOSAT5-12
[01222007]
=====
AO-21 AMSAT-OSCAR 21
Catalog Number: 21087
Launch Date: January 29, 1991

Status: Non-Operational

Uplink: 435.041 MHz FM DSP
Downlink: 145.983 MHz FM DSP
[01222007]
=====

FO-20 JAS-1b
Catalog number: 20480
Launch Date: February 07, 1990

Status: Non-Operational

Beacons: 435.795 MHz CW
435.910 MHz AX25

Voice Transponder:
Uplink: 145.900 to 146.000 MHz CW/LSB
Downlink: 435.800 to 435.900 MHz CW/USB

Digital Transponder:
Uplinks: 145.850 MHz
145.870 MHz
145.890 MHz
145.910 MHz
Downlink: 435.910 MHz

More FO-20 info can be found at:
http://www.amsat.org/amsat/sats/n7hpr/fo20.html
[01152007]
=====
WO-18 WEBERSAT
Catalog Number: 20441
Launch Date: January 22, 1990

Status: Non-Operational

Downlink: 437.104 MHz SSB 1200 Baud PSK AX.25
[05012006]
=====
DO-17 Dove
Catalog Number: 20440
Launch Date: January 22, 1990

Status: Non-operational.

Downlink: 145.825 MHz FM 1200 Baud AFSK
Beacon: 2401.220 MHz
[05012006]
=====
AO-16 PACSAT
Catalog number: 20439
Launch Date: January 22, 1990

Status: non-operational

Current Mode: V/u

Uplink: 145.900 MHz FM 1200-baud Manchester FSK (reserved)
145.920 MHz FM VOICE
145.940 MHz FM 1200-baud Manchester FSK (reserved)

145.960 MHz FM 1200-baud Manchester FSK (reserved)

Downlink: 437.026 MHz USB VOICE
(1200-baud PSK - MBL Telemetry Only)

Mode-S Beacon: 2401.1428 MHz [NO FUTURE OPERATIONS PLANNED]

Mode and Antenna Polarization:
U: RC 437.050 MHz RHCP
PSK 437.026 MHz LHCP
V: Linear

Broadcast Callsign: PACSAT-11
BBS: PACSAT-12

AO-16 AMSAT Webpage: http://www.amsat.org/amsat/sats/n7hpr/ao16.html
[07242009]
=====
UO-15 UoSAT-4
Catalog Number: 20438
Launch Date: January 22, 1990

Status: Non-operational

Uplink: ?
Downlink: 435.1250MHz (?)
435.1200MHz (?)
[06042009]
=====
UO-14 UoSAT-3
Catalog number: 20437
Launch date: January 22, 1990

Status: Non-operational

Uplink: 145.975 MHz FM
Downlink: 435.070 MHz FM
[05092004]
=====
FO-12 Fuji-OSCAR 12
Catalog Number: 16909
Launch Date: August 12, 1986

Status: Non-Operational

Mode V/U (J) Linear Transponder (Inverting):
Uplink: 145.9000 - 146.0000 MHz SSB/CW
Downlink 435.8000 - 435.9000 MHz SSB/CW

Mode V/U (J) Packet:
Uplink: 145.8500 MHz MFSK 1200 BPS
Uplink: 145.8700 MHz MFSK 1200 BPS
Uplink: 145.8900 MHz MFSK 1200 BPS
Uplink: 145.9100 MHz MFSK 1200 BPS

Downlink 435.9100 MHz PSK 1200 BPS

Telemetry Beacon: 435.7950 MHz SSB/CW
[01152007]
=====
AO-10 OSCAR 10
Catalog number: 14129
Launch Date: June 16, 1983

Status: Non-operational

Uplink: 435.030 to 435.180 MHz CW/LSB
Downlink: 145.975 to 145.825 MHz CW/USB

Beacon: 145.810 MHz (unmodulated carrier)

W4SM has more information about the satellite at the following URL:
http://www.cstone.net/~w4sm/AO-10.html
[05092004]
=====
AO-8 AMSAT-OSCAR 8
Catalog Number: 10703
Launch Date: March 3, 1978

Status: Non-Operational

Mode V/U (J) Linear Transponder (Non-Inverting): Non-Operational
Uplink: 145.9000 - 146.0000 MHz SSB/CW
Downlink 435.1990 - 435.2000 MHz SSB/CW

Mode V/U (J) TLM Beacon: Non-Operational
Downlink 435.0950 MHz CW

Mode V/A (A) Linear Transponder (Non-Inverting): Non-Operational
Uplink: 145.8500 - 145.9000 MHz SSB/CW
Downlink 29.4000 - 29.5000 MHz SSB/CW

Mode V/A (A) TLM Beacon: Non-Operational
Downlink 29.4020 MHz CW
[01152007]
=====
AO-6 AMSAT-OSCAR 6
Catalog Number: 06236
Launch Date: October 15, 1972

Status: Non-Operational

Uplink: 145.9000 - 146.0000 MHz SSB/CW
Downlink: 29.4500 - 29.5500 MHz SSB/CW
Beacons: 29.450 MHz
435.100 MHz
[01312008]
=====
AO-5 Australis-OSCAR 5
Catalog Number: 04321

Launch Date: January 23, 1970

Status: Non-Operational

Telemetry Beacons: 144.0500 MHz CW
29.4500 MHz CW
[01152007]
=====
OSCAR III
Catalog Number: 01293
Launch Date: March 09, 1965

Status: Non-Operational

Uplink: 145.9750 - 146.0250 MHz SSB/CW
Downlink: 144.3250 - 144.3750 MHz SSB/CW
[01012007]
=====
RS-15 RADIO SPORT RS-15
Catalog number: 23439
Launch Date: December 26, 1994

Status: Non-operational

Uplink: 145.858 to 145.898 MHz CW/USB
Downlink: 29.354 to 29.394 MHz CW/USB

Beacon 1: 29.352 MHz (intermittent)
Beacon 2: 29.398 MHz

SSB meeting frequency: 29.380 MHz (unofficial)
[06202004]
=====
RS-13 RADIO SPORT RS-13
Catalog number: 21089
Launch date: February 5, 1991

Status: Non-operational

Uplink: 21.260 to 21.300 MHz CW/USB
Downlink: 145.860 to 145.900 MHz CW/USB

Beacon: 145.860 MHz

Robot: 145.908 MHz
[05232004]
=====
RS-12 RADIO SPORT RS-12
Catalog number: 21089
Launch date: February 5, 1991

Status: Non-operational

Uplink: 21.210 to 21.250 MHz CW/USB
Downlink: 29.410 to 29.450 MHz CW/USB

Beacon: 29.408 MHz

Robot: 29.454 MHz
[05232004]
NNNN
/EX

ANS is released worldwide via the AMSAT ANS e-mail reflector and a live radiocast on the AMSAT-NA 20-meter net held each Sunday on 14.282 MHz. Pre-net operations start at 18:00 UTC, with current ANS bulletins transmitted to the eastern U.S. at 19:00 UTC and to the western U.S. at 19:30 UTC.

Information on AMSAT-NA is available at the following URL:
http://www.amsat.org

Mailing address:
AMSAT-NA
850 Sligo Avenue, Suite 600
Silver Spring, Maryland 20910-4703

Voice: 301-589-6062
888-322-6728
FAX: 301-608-3410

Currently, AMSAT-NA supports the following (free) mailing lists:

* AMSAT News Service (ANS)
* General satellite discussion (AMSAT-BB)
* Orbit data (KEPS)
* Manned space missions (SAREX)
* District of Columbia area (AMSAT-DC)
* New England area (AMSAT-NE)
* AMSAT Educational Liaison mailing list (AMSAT-EDU)
* AMSAT K-12 Educational Liaison mailing list (AMSAT-K12)

A daily digest version is available for each list.

To subscribe, or for more list information, visit the following URL:
http://www.amsat.org/mailman/listinfo/ans

In addition to regular membership, AMSAT-NA offers membership in the President's Club. Members of the President's Club, as sustaining donors to AMSAT Project Funds, will be eligible to receive additional benefits. Application forms are available from the AMSAT-NA Office.

This week's Weekly Satellite Report Editor is James French, W8ISS.

ANS is always dedicated to past ANS editor 'BJ' Arts, WT0N, and to the memory of longtime AMSAT supporters Werner Haas, DJ5KQ, Dennis Kitchen, G0FCL and John Branegan GM4IHJ.

Please send any amateur satellite news or reports to: ans-editor{at} amsat.org
NNNN

/EX

126. Crossposting Permitted to rec.radio.amateur.moderated

Newsgroup: rec.radio.amateur.space
Date: 2012-09-01 06:00:02 UTC
From: rram@panix.com
Message-ID: <radio/ham-radio/moderated/crossposting-1-1346479201@panix.com>
Source record: 226
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space,rec.radio.info

```
Posted-By: auto-faq 3.3.2 beta (PGPMoose V2.0, Perl 5.005)
Archive-name: radio/ham-radio/moderated/crossposting
Revision: 1.2 2011/11/02 04:08:53
Posting-Frequency: posted twice monthly
URL: http://www.panix.com/~rram/usenet/rram/index.html

Changes followed by "|".

After a 30-day public discussion and feedback period to gauge reader
opinions in March of 2009:

http://groups.google.com/group/rec.radio.amateur.moderated/browse_thread/thread/d7d337db35
f23326

the rec.radio.amateur.moderated Moderation Team had decided to consider |
amending its charter, and permit limited simultaneous crossposting to
rec.radio.amateur.moderated and one other unmoderated
amateur-radio-related discussion newsgroup. After a successful trial |
period (90 days, through early July 2009), we decided to adopt this |
change permanently. |

Approved rec.radio.amateur.* newsgroups are those that are currently
listed in the latest version of the "List of Big Eight Newsgroups" which
is crossposted monthly to news.announce.newgroups, news.groups, and
news.lists.misc.

Approved alt.radio.amateur.* and alt.ham-radio.* newsgroups are those
that have been created consistent with the suggestions in "So You Want
to Create an Alt Newsgroup" at:

http://www.faqs.org/faqs/alt-creation-guide/

Approved regional hierarchy newsgroups are those that contain either
"radio.amateur" or "ham-radio" in their names, including
uk.radio.amateur and aus.radio.amateur.misc.

We will make every reasonable effort to keep our list of approved
newsgroups up-to-date. In case we have overlooked any, and a submission
is rejected in error as a result, the rejected submitter can E-mail us
at our administrative contact address (in the signature at the bottom of
this article, and the default Reply-To for the rejection message)
requesting that it be added, and that the article be approved. We may
still choose to reject articles crossposted to any alt.* newsgroup with
an inappropriate name, including obscene language, embedded
name-calling, or encouragement of unlawful conduct.
```

Please direct any comments, questions, or criticisms to
rec-radio-amateur-moderated-request@panix.com.

127. ANS-246 AMSAT News Service Weekly Bulletins

Newsgroup: rec.radio.amateur.space
Date: 2012-09-02 14:25:55 UTC
From: JoAnne Maenpaa <k9jkm@comcast.net>
Message-ID: <000f01cd8916$d5ef0670$81cd1350$@net>
Source record: 227
Cross-posted to: rec.radio.amateur.space,rec.radio.info

AMSAT NEWS SERVICE
ANS-246

ANS is a free, weekly, news and information service of AMSAT North America, The Radio Amateur Satellite Corporation. ANS reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in designing, building, launching and communicating through analog and digital Amateur Radio satellites.

Please send any amateur satellite news or reports to:

ans-editor at amsat.org

In this edition:
* Board of Directors Ballots Due by September 15
* IARU International Amateur Radio Satellite Forum
* Atlas V Launch From Vandenberg Re-scheduled to September 13
* Rooms Still Available for AMSAT-UK Colloquium
* Smartphone and Kinect Satellite Presentations at AMSAT-UK Colloquium
* TAPR Digital Communications Conference in Atlanta September 21 - 23
* NASA Issues Request for Information - Nano Satellite Launch Challenges
* Satellite Shorts From All Over
* ARISS Status - 27 August 2012

SB SAT @ AMSAT $ANS-246.01
ANS-246 AMSAT News Service Weekly Bulletins

AMSAT News Service Bulletin 246.01
From AMSAT HQ SILVER SPRING, MD.
September 2, 2012
To All RADIO AMATEURS
BID: $ANS-246.01

Board of Directors Ballots Due by September 15

AMSAT Corporate Secretary Alan Biddle, WA4SCA reminds all AMSAT-NA members, "Your ballots for the 2012 Board of Directors election need to be received at AMSAT-NA headquarters by September 15th, 2012. This is one of your best opportunities to make your views on the path of our organization known."

Ballots for the 2012 AMSAT-NA Board of Directors election have been mailed to all members. Also included is biographical information about each of the candidates.

Select no more than three of the six listed candidates (in alphabetical order):

+ Tom Clark, K3IO
+ Steve Coy, K8UD
+ Mark Hammond, N8MH
+ Lou McFadin, W5DID
+ Gould Smith, WA4SXM
+ Patrick E. Stoddard, WD9EWK

The 3 candidates receiving the most votes will become directors serving 2 year terms. The 2 receiving the next highest number of votes will be seated as alternates for 1 year terms.

You must mail your ballot back to be received at the AMSAT-NA Office no later than the close of business on September 15, 2012:

AMSAT
850 Sligo Avenue, #600
Silver Spring, MD 20910

[ANS thanks AMSAT Corporate Secretary Alan Biddle, WA4SCA for the above information]

IARU International Amateur Radio Satellite Forum

The IARU International Amateur Radio Satellite Forum will this year be held in conjunction with the AMSAT-UK Colloquium which takes place in Guildford, England on the weekend of September 15-16.

(See: http://www.uk.amsat.org/9862)

The forum, chaired by IARU Amateur Satellite Advisor Hans van de Groenendaal ZS6AKV, takes place on Saturday, September 15 at 1700 BST (1600 UT).

On the Agenda is a report on the activities of the IARU Satellite Adviser and his Advisory Panel.

Colloquium information: http://www.uk.amsat.org/colloquium/twelve

IARU Amateur Radio Satellite Frequency Coordination:
http://www.iaru.org/satellite/

[ANS thanks AMSAT-UK for the above information]

Atlas V Launch From Vandenberg Re-scheduled to September 13

The Atlas V NROL-36 launch from Vandenberg Air Force Base in California, originally planned for August has been now re-scheduled for September 13. This date was selected as one of the first available for launch range operations.

This launch will be carrying a pair of ocean surveillance satellites
to locate ships at sea. Also aboard this flight at four cubesats as
part of ELaNa IV mission and seven cubesats for government missions.

The ELaNa Cubesats aboard are:
+ CINEMA (Cubesat for Ion, Neutral, Electron, Magnetic fields)
o Downlinks for engineering telemetry and command are in the
2400-2450 MHz range; Science telemetry is in 2200-2300 MHz
range.

+ CSSWE (Colorado Student Space Weather Experiment)
o Downlink 437.345 MHz, 9k6 with AX25

+ CP5 (PolySat)
o Downlink 437.405 MHz at 1 watt, AFSK on LSB AX.25 over NRZI at
1200 baud, every 2 minutes, begins 3.5 hours after first turn-on.

+ CXBN (Cosmic X-Ray Background Nanosatellite)
o Downlink 437.525 MHz, GFSK, AX.25

The US Government Satellites aboard are:
+ Aeneas
o First cubesat to deploy 2.4 GHz Dish Antenna. WIFI transmitter
will transmit on 2425.0 MHz with 1 watt of output power.
o Downlink 437.600 MHz AX25 1200 bps beacon every 10 seconds and
spread spectrum two-way link elsewhere in the 70cm band.
+ ORSES (ORS Enabler Satellite)
+ Horus
+ Re
+ Aerocube 4A, 4B, 4C
o Testing deployable solar panels.
o Technology demonstration of parachute-like devices to deorbit
satellites.
o Testing closed-loop attitude control system based around a
three-axis gyroscope.

A discussion of the launch re-scheduling can be found on-line at:
http://www.nasaspaceflight.com/2012/08/uatlas-v-launch-nrol-36-vandenberg
/

Please refer to the prior bulletin for mission summaries and satel-
lite team web pages: http://amsat.org/pipermail/ans/2012/000637.html

A detailed article of the launch can be found on-line at:
http://www.americaspace.org/?p#568

[ANS thanks NASA, the CubeSat Teams noted above, AMSAT-UK, Gunter's
Space Page and nasaspaceflightnow.com for the above information]

Rooms Still Available for AMSAT-UK Colloquium

AMSAT-UK Hon Sec Jim Heck, G3WGM says, "There are still rooms avail-
able at the hotel at which the AMSAT-UK Colloquium will be held on

September 14, 15 and 16. The location of the Colloquium is at the Holiday Inn, Guildford, Surry, UK. TO BE SURE OF A ROOM AT THE HOTEL YOU SHOULD BOOK AS SOON AS POSSIBLE TO AVOID DISSAPPOINTMENT!"

This week, Dave Johnson, G4DPZ announced on behalf of the AMSAT-UK Committee that the program for the Colloquium is now posted on-line at: http://tinyurl.com/amsat2012

AMSAT-UK is pleased to welcome senior representatives from AMSAT-NA, AMSAT-DL and AMSAT-SA who will be giving status updates on their respective development programs.

There will be an update on the FUNcube project as well as some real-time demos of the Engineering model.

There are some other surprises in the programme, so please take a look.

Details of the Colloquium itself can be found at:
http://www.uk.amsat.org/colloquium/twelve

Exclusive New Product Launch at AMSAT-UK Colloquium

AMSAT-UK are delighted to announce that Howard Long, G6LVB, will be present at the Colloquium this year and will be launching a new "FUNcube Dongle PRO-PLUS" during his presentation.

Full technical details have been embargoed until his talk and we are not permitted to steal his thunder by releasing further details of this new product in advance. Attendees at the Colloquium will therefore be the first to learn about Howard's latest development which will further advance the applications for SDR devices.

Further details are at: http://www.uk.amsat.org/9565#more-9565 - and at - http://www.uk.amsat.org/colloquium/twelve.

You can book online using PayPal or Credit Card at:
http://shop.amsat.org.uk/shop/catalog/browse

[ANS thanks AMSAT-UK Hon Sec Jim Heck, G3WGM,
Dave, G4DPZ and Trevor, M5AKA for
the above information]

Smartphone and Kinect Satellite Presentations at AMSAT-UK Colloquium

Dr Chris Bridges recently appeared on the nationwide TV channel Sky News discussing why space is cool. On September 15-16 he will be giving two presentations to the AMSAT-UK International Space Colloquium at the Holiday Inn, Guildford, GU2 7XZ, UK. For the details of the Colloquium see: http://www.uk.amsat.org/colloquium/twelve

Chris will cover the Nexus Android Smartphone amateur radio satellite STRaND-1 which will carry both a Resistojet and a Pulsed Plasma Thruster (PPT) module and STRaND-2 which will use Microsoft Xbox

Kinect controller technology.

STRaND stands for Surrey Training, Research and Nanosatellite Demonstration and the programme is intended to be a long-term arrangement between the space company SSTL and academic researchers at the Surrey Space Centre (SSC), with STRaND-1 the first of a long line of STRaND nanosatellites.

The dual STRaND-2 cubesats will test a novel in-orbit docking system based upon XBOX Kinect technology that could change the way space assets are built, maintained and decommissioned. The identical twin STRaND-2 satellites will each be a 3 unit Cubesat. Components from the XBOX Kinect games controller to scan the local area and provide the satellites with spatial awareness on all three axes.

SSTL says on their web site, "The STRaND-2 twins will be separated after launch. After the initial phase of system checks, the two satellites will be commanded to perform the docking procedure and, when in close proximity, the Kinect-based docking system will provide the satellites with 3D spatial awareness to align and dock. Other applications for STRaND-2 include the safe removal of space debris and spacecraft maintenance, with a low cost "snap-on" nanosatellite providing backup power, propulsion or additional on-board computing capability."

SSTL Project Lead Shaun Kenyon says, "We were really impressed by what MIT had done flying an autonomous model helicopter that used Kinect and asked ourselves: Why has no-one used this in space? Once you can launch low cost nanosatellites that dock together, the possibilities are endless, like space building blocks."

Dr. Chris Bridges, Surrey Space Centre Project Lead says, "It may seem far-fetched, but our low cost nanosatellites could dock to build large and sophisticated modular structures such as space telescopes. Unlike today's big space missions, these could be reconfigured as mission objectives change, and upgraded in-orbit with the latest available technologies."

The SSTL employees involved with the STRaND programme are volunteers. It is a condition of the programme that volunteers from SSTL and SSC use their own, free time for STRaND activities (such as lunches and breaks). The project has no budget for staff so is entirely dependent on volunteers.

For further information see http://www.uk.amsat.org/?p&#65533;46

[ANS thanks AMSAT-UK for the above information]

TAPR Digital Communications Conference in Atlanta September 21 - 23

The ARRL/TAPR Digital Communications Conference is an international forum for radio amateurs to meet, publish their work, and present

new ideas and techniques. Presenters and attendees will have the opportunity to exchange ideas and learn about recent hardware and software advances, theories, experimental results, and practical applications.

Topics include, but are not limited to: Software Defined Radio, digital voice (D-Star, P25, WinDRM, FDMDV, G4GUO), digital satellite communications, Global Position System, precision timing, Automatic Position Reporting System, Digital Signal Processing, HF digital modes, spread spectrum,

This week TAPR published the schedules for the technical and introductory sessions: http://www.tapr.org/pdf/DCC_2012_Schedule.pdf

The DCC Saturday Night Banquet Speaker & Topic will be Bdale Garbee, KB0G talking about the "Sharing the Joy of Making"

The DCC Sunday Morning Seminar will be a hands-on tutorial using Gnuradio to design and implement software defined radios on your laptop presented by Tom Rondeau, KB3UKZ, the leader of the Gnuradio project.

All of the seminar information and registration can be accessed at: http://www.tapr.org/dcc.html

[ANS thanks ARRL and TAPR for the above information]

NASA Issues Request for Information - Nano Satellite Launch Challenge

On August 10, 2012 NASA published a Request for Information (RFI), titled, "Centennial Challenges Nano Satellite Launch Initiative". The full text of this RFI is available on the US General Services Administration web at: http://tinyurl.com/NASA-NanoSatellite-RFI

Centennial Challenges is a program of prize competitions to stimulate innovation in technologies of interest and value to NASA and the nation.

In 2010 NASA announced a Nano-Satellite Launch (NSL) Challenge to encourage development of safe, low-cost, small-payload delivery systems for frequent access to low Earth orbit (LEO) through innovations in propulsion and other technologies as well as operations and management for broader applications in future launch systems that could result in a commercial capability for dedicated launches of small satellites at a cost comparable to secondary payload launches. To assist in formulation of the Nano-Satellite Launch Challenge, NASA is seeking additional information on the nano-satellite market and on approaches to address the market needs.

There are currently several existing launch vehicles and new launch vehicle programs that could provide ride-sharing opportunities for nano-satellite.

This NASA Nano Satellite Launch Challenge focuses on:

+ Launch vehicle design dedicated to providing greater payload design flexibility for cubesats and other small payloads, more frequent access to space at costs comparable or less than existing or proposed ride-share launch options.

+ Tradeoff designs for a payload market for a very low cost vehicle but with less orbital accuracy or lower reliability?

+ How frequently should the vehicle launch?

+ Initially the Challenge competition would be for one year and a $3M prize purse would be divided between all successful competitors.

+ A second phase of the competition would require successful competitors to deliver payloads to LEO at least ten times within a one-year period using a launch system sized to deliver up to 10Kg to LEO.

o A total prize purse of $6M would be offered for at least 10 successful payload deliveries to LEO orbit: 1st Place receiving $3M for most deliveries; 2nd place, $2M for next most deliveries; and 3rd place, $1M for next most deliveries.

Responses must be submitted in electronic form no later than September 10, 2012 to Dr. Larry Cooper, Centennial Challenges Program, NASA Headquarters, 300 E Street, SW, Washington, DC 20546-0001. E-mail address: larry.p.cooper at nasa.gov.

For general information on the NASA Centennial Challenges Program see: http://www.nasa.gov/challenges.

[ANS thanks NASA for the above information]

Satellite Shorts From All Over

+ The AMSAT News Service Bulletins are translated into French by Jean-Claude Aveni, TK5GH, and published on the AMSAT-Francophone web page at: http://www.amsat-f.org/site/index.php

+ Check out the unveiling of the new ICOM IC-7100 HF/50/144/430 MHz transceiver at the Ham Fair 2012 in Tokyo: http://www.youtube.com/watch?v=rd6nQKV9s&feature=are

+ Korean artist Hojun Song traveled to Malm in Sweden to give this keynote presentation about his innovative amateur radio CubeSat OSSI-1 to the Media Evolution Conference on August 23. OSSI-1 has a beacon in the 145 MHz band and a data communications transceiver in the 435 MHz band. It carries a 44 watt LED array to flash Morse Code messages to observers on Earth. Watch the video at: http://www.uk.amsat.org/9921 - and - http://www.uk.amsat.org/9600

+ Enjoy Hubble's Hidden Treasures selected from an archive of more than 700,000 raw images. More than 3,000 submissions which include

some of Hubble's incredible celestial treasures are revealed at:
http://www.spacetelescope.org/projects/hiddentreasures/

+ Danish photographer Hans Nyberg has an interactive, scrollable
panorama for Apollo 11:
http://www.panoramas.dk/moon/apollo-11-the-first-man-on-moon.html

[ANS thanks everyone for the above information]

ARISS Status - 27 August 2012

1. Upcoming School Contacts

The Iruma Junior Ham Club in Iruma, Japan will participate in an ARISS (Amateur Radio on the International Space Station) contact on Sunday, September 2 at 08:32 UTC. The club members recently received their amateur radio licenses and are learning about satellite orbits and space. They look forward to speaking with Astronaut Akihiko Hoshide on the ISS.

2. Students Make Connection with Akihiko Hoshide on ISS

Students from Institute for Education on Space, Wakayama University in Wakayama, Japan spoke with on-orbit Astronaut Akihiko Hoshide, KE5DNI via an ARISS contact on Sunday, August 26. The contact highlighted science lessons about space, satellites and radio waves.

3. ARISS International Team Meeting Held

The monthly ARISS International Team meeting was held on Tuesday, August 21. The team discussed whether ARISS supporters should be recognized on the ARISS website and a status was given on the HamTV project and on the new Ericsson VHF radio which is scheduled to launch later this year. Minutes have been posted:
http://ariss.rac.ca/arisstel2012-08-21.htm

4. Astronaut Training Status

Gregory Wiseman, KF5LKT is scheduled for a basic operations training session in September. Wiseman is slated to fly with the Expedition 40 crew in May 2014.

[ANS thanks Carol, KB3LKI, for the above information]

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In addition to regular membership, AMSAT offers membership in the President's Club. Members of the President's Club, as sustaining donors to AMSAT Project Funds, will be eligible to receive additional benefits. Application forms are available from the AMSAT Office.

Primary and secondary school students are eligible for membership at one-half the standard yearly rate. Post-secondary school students enrolled in at least half time status shall be eligible for the student rate for a maximum of 6 post-secondary years in this status. Contact Martha at the AMSAT Office for additional student membership information.

73,
This week's ANS Editor,
Lee McLamb, KU4OS

128. Weekly Highlights of Solar and Geomagnetic Activity, 27 August - 02 September 2012

Newsgroup: rec.radio.amateur.space
Date: 2012-09-03 15:30:08 UTC
From: SWPC.Webmaster@noaa.gov
Message-ID: <20120903153001.C453F33C7E@panix2.panix.com>
Source record: 228
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.dx,rec.radio.amateur.space,rec.radio.shortwave,rec.radio.info

```
:Product: Weekly Highlights and Forecasts
:Issued: 2012 Sep 03 1342 UTC
# Prepared by the US Dept. of Commerce, NOAA, Space Weather Prediction Center
# Product description and SWPC contact on the Web
# http://www.swpc.noaa.gov/weekly.html
#
# Weekly Highlights and Forecasts
#
Highlights of Solar and Geomagnetic Activity
27 August - 02 September 2012

Solar activity was very low 27 and 28 August. Moderate activity was
observed on 30 August as Region 1563 (S25, L=078, class/area Dso/70
on 01 September) produced the largest flare of the period, an M1 at
30/1211 UTC. Solar activity was at low levels for the remainder of
the period. A C8/2f flare associated with a filament eruption in the
southeast quadrant of the solar disk occurred at 31/2043 UTC. An
associated CME was observed on SOHO/LASCO and STEREO A/B
coronagraphs with a possible Earth-directed trajectory. Two other
CMEs were observed on 02 September in STEREO A COR2 imagery
beginning at 02/0409 UTC and 02/1109 UTC with potential
Earth-directed components.

A greater than 10 MeV proton event (category S1-Minor) associated
with the filament eruption on 31 August, began at 01/1335 UTC,
reached a maximum of 60 pfu at 02/0850 UTC, and is currently above
threshold.

The greater than 2 MeV electron flux at geosynchronous orbit was at
moderate levels on 27 August. Levels increased to high from 28
through 31 August. Moderate levels were observed for the remainder
of the period.

Geomagnetic field activity was mostly quiet from 27 August through
01 September. Activity increased on 02 September with unsettled to
active conditions observed due to an extended period of negative Bz.

Forecast of Solar and Geomagnetic Activity
03 September - 29 September 2012

Solar activity is expected to be at very low to low levels with a
slight chance for M-class activity through the forecast period.
```

The greater than 10 MeV proton event currently in progress is expected to remain above the 10 pfu threshold 03-04 September with a additional enhancements possible with CME arrivals.

The greater than 2 MeV electron flux at geosynchronous orbit is expected to be at moderate or lower levels from 03-16 September, 21-23 September, and 27-29 September. High levels are forecast 17-20 September and 24-26 September due to coronal hole (CH) effects.

Geomagnetic field activity is expected to be as high as minor storm (G1) conditions on 03 September with anticipated effects from the 31 August CME. Residual elevated conditions ranging from unsettled to minor storm levels are expected to persist from 03-06 September due to continued transient activity in conjunction with possible CH effects. Mostly quiet conditions are expected from 08 September through 29 September with the exception of two CH periods; 14-16 September and 20-23 September, which should see unsettled to active periods.

129. Radio Meteor Obs. Bull. August 2012 Perseids

Newsgroup: rec.radio.amateur.space
Date: 2012-09-05 21:50:02 UTC
From: Chris Steyaert <observations@rmob.org>
Message-ID: <s5if48hg81fke6ojbbpc4nhoovbsh64qi3@4ax.com>
Source record: 229
Cross-posted to: rec.radio.amateur.space,sci.astro.amateur

Radio Meteor Observation Bulletin No. 229 of August 2012 (75K) is available now as

http://www.rmob.org/rmobtext/rmob1208.txt

More information and the visual presentation of the hourly forward scatter counts can be found on

http://www.rmob.org

Chris

130. WSR-247 AMSAT Weekly Satellite Report

Newsgroup: rec.radio.amateur.space
Date: 2012-09-07 20:00:22 UTC
From: JoAnne Maenpaa <k9jkm@comcast.net>
Message-ID: <001601cd8d32$ad7fd690$087f83b0$@net>
Source record: 230
Cross-posted to: rec.radio.amateur.space,rec.radio.info

```
This report is organized into four (4) parts.
Part 1 (S1) - operational analog amateur satellites
Part 2 (S2) - operational digital amateur satellites
Part 3 (S3) - non - operational satellites
Part 4 (S4) - deborbited/returned satellites

SB SAT @ AMSAT W8ISS $WSR-247.S1
WSR 247 Part 1 09/03/2012

AMSAT NEWS SERVICE BULLETIN 247.S1
FROM AMSAT HQ SILVER SPRING, MD, September 03, 2012
TO ALL RADIO AMATEURS
BID: $WSR-247.S1

PW-Sat
Catalog Number: 38083 (?)
Launch Date: Febrauary 13, 2012
Launch Site: Kourou, French Guiana

Status: On Orbit

Uplink: 435.020 MHz FM
Downlink: 145.900 MHz DSB

Beacon:

Callsign:

URL:

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=132
[07162012]
=====
DO-64 Delfi-C3
Catalog number: 32789
Launch Date: April 28, 2008 0354z
Launch site: Satish Dhawan Space Centre, India

Status: Operational
Current Mode: Science Mode - Beacon ONLY

Telemetry: 145.870 MHz

Downlink: 145.880 to 145.920 MHz
Uplink: 435.530 to 435.570 MHz
```

Delfi-C3 web page: http://www.delfic3.nl/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=68
[02092011]
=====
VO-52 HAMSAT
Catalog number: 28650
Launch Date: May 05, 2005 0444z
Launch site: Satish Dhawan Space Centre, India

Status: Operational
Current Mode: U/v - Dutch Transponder

Frequencies:
Indian Transponder:
Uplink: 435.220 to 435.280 MHz LSB/CW
Downlink: 145.930 to 145.870 MHz USB/CW

Dutch Transponder:
Uplink: 435.225 to 435.275 MHz LSB/CW
Downlink: 145.925 to 145.875 MHz USB/CW

Indian Beacon: 145.9360 MHZ CW
Dutch Beacon: 145.860 MHz 12WPM with CW message

Mode and Antenna Polarization:
V: LHCP
U: RHCP

Official Webpage: http://www.amsatindia.org/hamsat.htm

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=30

To know what transponder is switched on please listen for the beacon
that is active. Each transponder has a different beacon.
[03232012]
=====
SO-50 SAUDISAT-1C
Catalog number: 27607
Launch date: December 20, 2002 1700z
Launch site: Baikonur, Kazakhstan

Status: Operational

Current Mode: V/u

Uplink: 145.850 MHz FM - 67.0 Hz PL tone
Downlink: 436.795 MHz

Mode and Antenna Polarization:
V: Linear
U: Linear

Official Webpage: http://saudisat.kacst.edu.sa/index.shtml
(not up and running currently)

To switch the transmitter on, you need to send a CTCSS tone of 74.4
Hz. The order of operation is thus: (allow for Doppler as necessary):
1) Transmit on 145.850 MHz with a tone of 74.4 Hz to arm the 10 minute
timer on board the spacecraft.
2) Now transmit on 145.850 MHz (FM Voice) using 67.0 Hz to PT the re-
peater on and off within the 10 Minute window.
3) Sending the 74.4 tone again within the 10 minute window will reset
the 10 minute timer.
[02092011]
=====
FO-29 JAS-2
Catalog number: 24278
Launch Date: August 17, 1996

Status: Operational
Current Mode: V/u (Mode JA)

Voice/CW (Mode JA)
Uplink: 145.90 to 146.00 MHz CW/LSB
Downlink: 435.80 to 435.90 MHz CW/USB
Beacon: 435.795 MHz

Digital Mode JD
Uplinks: 145.850 MHz FM
145.870 MHz FM
145.910 MHz FM
Downlink: 435.910 MHz 1200-baud BPSK or 9600-baud FSK
Callsign: 8J1JCS
Digitalker: 435.910 MHz

Mode and Antenna Polarization:
V: RHCP
U: RHCP

For current operational schedule for FO-29:
http://www.ne.jp/asahi/m-arai/gkz/satinfo/fo29e.htm

JARL English webpage:
http://www.jarl.or.jp/English/5_Fuji/ejasmenu.htm

AMSAT-NA Webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID
=5&retURL=/satellites/status.php

Mineo Wakita, JE9PEL, has created a simple decoder program for FO29's
CW telemetry downlink: http://www.ne.jp/asahi/hamradio/je9pel/
fo29cwts.htm
[01122012]
=====
AO-27 AMRAD
Catalog number: 22825

Launch date: September 26, 1993 0140z
Launch site: Kourou, French Guiana

Status: Operational

Current Mode: V/u

Uplink: 145.850 MHz FM
Downlink: 436.797 MHz FM

Mode and Antenna Polarization:
V: Linear
U: Linear

Official Webpage: http://www.ao27.org
[02092011]
=====
AO-7 AMSAT OSCAR 7
Catalog number: 07530
Launch Date: November 15, 1974
Launch site: Vandenberg AFB, California, USA

Status: Operational

Current Mode: Alternating between Mode A and B every 24 hours

Uplink: 145.850 to 145.950 MHz CW/USB Mode A
432.125 to 432.175 MHz CW/LSB Mode B
Downlink: 29.400 to 29.500 MHz CW/USB Mode A (1W PEP)
145.975 to 145.925 MHz CW/USB Mode B (8W PEP)
145.975 to 145.925 MHz CW/USB Mode C (2W PEP)
Beacons: 29.502 MHz CW
145.972 MHz CW
435.100 MHz CW
2304.100 MHz CW

Official Webpage:
http://www.amsat.org/amsat-new/satellites/sat_summary/ao7.php
[04242012]
=====
INTERNATIONAL SPACE STATION (ISS) - ARISS
Catalog number: 25544
Launch date: November 20, 1998 0640z (ZARYA module)
Launch sites: Baikonur, Kazakhstan
Kourou, French Guiana
Uchinoura Space Center, Japan
Kennedy Space Center, Titusville, Florida, USA

Status: Operational

Current Active Modes: FM Repeater - OFF
Voice - V/v
BBS - OFF
2m APRS - OFF

70cm APRS - ON
70cm Digi - ON
SSTV - OFF

Expedition 32 Crew (July 2012 - November 2012):
Commander: Gennady Padalka RN3DT
Flight Engineer: Joe Acaba KE5DAR
Flight Engineer: Sergei Revin RN3BS
Flight Engineer: Sunita Williams KD5PLB
Flight Engineer: Yuri Malenchenko RK3DUP
Flight Engineer: Akihiko Hoshide KE5DNI

Available Modes and Frequencies:
Digital/APRS:
Worldwide 2m packet uplink: 145.825 MHz FM 1k2
Worldwide 2m packet downlink: 145.825 Mhz FM 1k2
Worldwide 70cm packet uplink: 437.550 Mhz FM 1k2
Worldwide 70cm packet downlink: 437.550 Mhz FM 1k2

Voice:
Region 1 voice uplink: 145.200 MHz FM
Region 2/3 voice uplink: 144.490 MHz FM
Worldwide downlink: 145.800 MHz FM

Crossband Repeater:
Repeater Uplinks: 1269.650 MHz FM
437.800 MHz FM
145.990 MHz FM - 67.0 PL (Kenwood)
Repeater Downlink: 145.800 MHz FM
437.800 MHz FM (Kenwood)

SSTV Robot 36:
Downlink: 145.800 MHz FM

Mode and Antenna Polarization:
V: Linear
U: Linear

Callsigns:
Belgian: OR4ISS
German: DP0ISS
Russian: RS0ISS
RZ3DZR
United States: NA1SS
2m Packet Mailbox: RS0ISS-11
2m Digipeater alias: ARISS
70cm Packet Mailbox: RS0ISS-1
70cm Digipeater callsign: RS0ISS
70cm Digipeater alias: ARISS

Official ARISS Webpage: http://www.rac.ca/ariss
ISS Fan Club Webpage: http://www.issfanclub.com
APRS tracking page: http://www.ariss.net/

ISS Daily Crew Schedule: http://spaceflight.nasa.gov/station/timelines
Remember that the crew operates on UTC time. Also, all of the time
line is NOT translated from Russian and posted.
[08062012]
NNNN
/EX

SB SAT @ AMSAT W8ISS $WSR-247.S2
WSR 247 Part 2 09/03/2012

AMSAT NEWS SERVICE BULLETIN 247.S2
FROM AMSAT HQ SILVER SPRING, MD, September 03, 2012
TO ALL RADIO AMATEURS
BID: $WSR-247.S2

RS-40 MiR (Yubileiny-2)
Catalog Number: 38735
Launch Date: July 28, 2012

Status: On Orbit

Uplink:
Downlink(s): 435.265 MHz
435.365 MHz

Beacon:

Callsign:

URL:
[08272012]
=====
HORYU-II
Catalog number: 38340
Launch Date: May 17, 2012

Status: On Orbit

Uplink: 145.??? MHz
Downlink: 437.375 MHz CW/AX25/FSK

Beacon: 437.375 MHz CW

Callsign: JG6YBW

URL:

IARU Coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=216
[05282012]
=====
XaTcobeo
Catalog Number: 38082
Launch Date: Febrauary 13, 2012
Launch Site: Kourou, French Guiana

Status: Operational

Uplink:
Downlink: 437.365 MHz FFSK with AX.25

Beacon:

Callsign:

URL:

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=135
[03162012]
=====
UniCubeSat
Catalog Number: 38085(?)
Launch Date: Febrauary 13, 2012
Launch Site: Kourou, French Guiana

Status: Operational

Uplink:
Downlink: 437.305 MHz 9k6 bps GMSK

Beacon:

Callsign:

URL:
http://www.gaussteam.com/index.php?option=com_content&view=article&id=96:uni
cu
besat&catid=36:unicubesat&Itemid=183

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=133
[08272012]
=====
Robusta
Catalog Number: 38083(?)
Launch Date: Febrauary 13, 2012
Launch Site: Kourou, French Guiana

Status: On Orbit

Uplink:
Downlink: 437.325 MHz 1k2 FM telemetry (data every 3 min, 20 sec. burst)

Beacon:

Callsign:

URL:

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=122
[08272012]

=====
MO-72 MaSat-1
Catalog Number: 38081
Launch Date: Febrauary 13, 2012
Launch Site: Kourou, French Guiana

Status: Operational

Uplink:
Downlink: 437.345 MHz GFSK 625/1250 bps
437.345 MHz CW

Beacon:

Callsign:

URL:

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=126
[03232012]
=====
Goliat
Catalog Number: 38084(?)
Launch Date: Febrauary 13, 2012
Launch Site: Kourou, French Guiana

Status: Operational

Uplink:
Downlink: 437.485 MHz 1k2 AFSK

Beacon:

Callsign:

URL:

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=98
[08272012]
=====
E-St@r
Catalog Number: 38079
Launch Date: Febrauary 13, 2012
Launch Site: Kourou, French Guiana

Status: On Orbit

Uplink:
Downlink: 437.445 MHz 1k2 bps AFSK

Beacon:

Callsign:

URL:

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=130
[07302012]
=====
ALMASat-1
Catalog Number: 38078
Launch Date: Febrauary 13, 2012
Launch Site: Kourou, French Guiana

Status: On Orbit

Uplink:
Downlink: 437.465 MHz 1k2 bps FSK
2407.850 MHz

Beacon:

Callsign:

URL:

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=39
[02212012]
=====
RS-39 Chibis-M
Catalog Number: 38051
Launch Date: October 30, 2011 10:11:00 UTC
Launch site: Tyuratam (Baikonur Cosmodrome), Kazakhstan

Status: Operational

Uplink:
Downlink:

Beacon: 435.315 MHz CW
435.215 MHz CW

Callsign:

URL:

IARU coordination status page:
[07302012]
=====
JUGNU
Catalog Number: 37839
Launch Date: October 12, 2011 05:30:00 UTC
Launch site: Satish Dhawan Space Centre, India

Status: On Orbit

Uplink: 145.??? MHz 1k2 (mode?)
Downlink: 437.505 MHz 9k6 (mode?)

Beacon: 437.275 MHz 15 wpm (?) CW

Callsign:

URL: http://www.iitk.ac.in/me/jugnu/index.htm

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=160
[07092012]
=====
SRMSAT
Catalog Number: 37841
Launch Date: October 12, 2011 05:30:00 UTC
Launch site: Satish Dhawan Space Centre, India

Status: On Orbit

Uplink: 145.900 MHz 1k AX.25 (speed?)
Downlink: 437.500 MHz 2k4 AX.25

Beacon: 437.425 MHz 12 wpm CW

Callsign:

URL: http://srmsat.in/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=181
[07092012]
=====
HRBE (E1P Explorer 1 [Prime] CubeSat (E1P-U2))
Catalog Number: 37855
Launch Date: October 28, 2011
Launch site: Vandenberg Air Force Base, California, USA

Status: On Orbit

Uplink: 437.305 MHz (???)
Downlink: 437.505 MHz AX.25 (SSB?)

Beacon:

Callsign:

URL: http://ssel.montana.edu/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=116
[01122012]
=====
M-Cubed
Catalog Number: 37855
Launch Date: October 28, 2011
Launch site: Vandenberg Air Force Base, California, USA

Status: On Orbit

Uplink:
Downlink: 437.485 MHz AX.25

Beacon:

Callsign:

URL: http://umcubed.org/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=215
[01122012]
=====
RAX-2
Catalog Number: 37853
Launch Date: October 28, 2011
Launch site: Vandenberg Air Force Base, California, USA

Status: Operational

Uplink:
Downlink: 437.345MHz 9k6 GMSK

Beacon:

Callsign:

URL: http://rax.engin.umich.edu//

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=221
[03232012]
=====
AO-71 AubieSat-1
Catalog Number: 37854
Launch Date: October 28, 2011
Launch site: Vandenberg Air Force Base, California, USA

Status: On Orbit

Uplink:
Downlink: 437.475 MHz 1k2 AX.25

Beacon: 437.475 MHz CW

Callsign: KI4NQO

URL: http://www.space.auburn.edu/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=148
[12262011]
=====
O/OREOS
Catalog Number: 37224
Launch Date: November 20, 2010

Launch site: Kodiak Launch Complex, Alaska, USA

Status: On Orbit

Uplink:
Downlink: 437.035 MHZ AX.25

Beacon:

Callsign:

URL: http://www.ooreos.org/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=146
[02092011]
=====
Rax-1 Radio Aurora Explorer
Catalog Number: 37223
Launch Date: November 20, 2010
Launch site: Kodiak Launch Complex, Alaska, USA

Status: On Orbit

Uplink:
Downlink: 437.505 MHz 9k6 GMSK

Beacon:

Callsign: RAX-1

URL: http://rax.engin.umich.edu/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=165
[02092011]
=====
FO-69 Fastrac-1 Sara Lily
Catalog Number: 37227
Launch Date: November 20, 2010
Launch site: Kodiak Launch Complex, Alaska, USA

Status: Operational

Uplink 1: 145.980 MHz 1k2 baud
Uplink 2: 145.825 MHz 1k2 baud
Downlink: 437.345 MHz 1k2 and 9k6 baud

Beacon: 437.435 MHz 1k2 AX.25

Callsign: Fast1

URL: http://fastrac.ae.utexas.edu/index.php

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=83

[07052011]
=====
FO-70 Fastrac-2 Emma
Catalog Number: 37380
Launch Date: November 20, 2010
Launch site: Kodiak Launch Complex, Alaska, USA

Status: Operational

Uplink 1: 435.025 MHz 1k2 baud
Uplink 2: 437.435 MHz 9k6 baud
Downlink: 145.825 MHz 1k2 and 9k6 baud

Beacon: 145.825 MHz 1k2 AX.25

Callsign: Fast2

URL: http://fastrac.ae.utexas.edu/index.php

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=84
[12162011]
=====
StudSat
Catalog Number: 36796
Launch Date: July 12, 2010 0352z
Launch site: Satish Dhawan Space Centre, India

Status: On Orbit

Uplink: 437.505MHz, 9600bps FSK
Downlink: 437.505MHz, 9600bps FSK
Beacon : 437.505MHz, 20bps ASK

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=164
[02092011]
=====
TIsat-1
Catalog Number: 36799
Launch Date: July 12, 2010 0352z
Launch site: Satish Dhawan Space Centre, India

Status: On orbit

Callsign: HB9DE

Uplink: 145.980MHz FM, AFSK
Downlink: 437.305MHz FM, AFSK
Beacon: 437.305MHz CW

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=118
[02092011]

=====
SwissCube
Catalog Number: 35932
Launch Date: September 23, 2009 0621z
Launch site: Satish Dhawan Space Centre, India

Status: Operational

Callsign: HB9EG

Beacon(100mw): 437.5050MHz CW
Beacon(1w): 437.5050MHz FSK 1k2bps

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=109
[02092011]
=====
UWE-2
Catalog Number: 35934
Launch Date: September 23, 2009 0621z
Launch site: Satish Dhawan Space Centre, India

Status: In Orbit

Beacon(500mw): 437.3850 MHz AFSK 1k2bps
437.3850 MHz FSK 9k6bps

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=110
[02092011]
=====
ITUpsAT1
Catalog Number: 35935
Launch Date: September 23, 2009 0621z
Launch site: Satish Dhawan Space Centre, India

Status: Operational

Beacon(100mw): 437.325MHz CW
Beacon(1w): 437.325MHz 19k2bps

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=113
[02092011]
=====
BEESAT
Catalog Number: 35933
Launch Date: September 23, 2009 0621z
Launch site: Satish Dhawan Space Centre, India

Status: Operational

Callsign: DP0BEE

Beacon(100mw): 436.000MHz CW
Beacon(500mw): 436.000MHz GMSK 4k8bps
Beacon(500mw): 436.000MHz GMSK 9k6bp
[02092011]
=====
CP-6
Catalog Number: 35003
Launch Date: May 19, 2009 2355z
Launch site: Wallops Island, Virginia, USA

Status: Operational

Downlink: 437.365 MHz 1k2 AFSK

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=121
[07302012]
=====
HAWKSAT 1
Catalog number: 35004
Launch Date: May 19, 2009 2355z
Launch site: Wallops Island, Virginia, USA

Status: operational

Downlink: 437.345 MHz ?

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=105
[07302012]
=====
Pharmasat
Catalog Number: 35002
Launch Date: May 19, 2009 2355z
Launch site: Wallops Island, Virginia, USA

Status: Operational

Downlink: 437.465 MHz 1k2 AFSK

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=94
[02092011]
=====
ANUSAT
Catalog Number: 34808
Launch Date: April 20, 2009 0115z
Launch Site: Satish Dhawan Space Centre, India

Status: ?

Downlink: 435.000 MHz
Uplink: 145.800 MHz

Telemetry: 137.400 MHz
[02092011]
=====
SOHLA-1 (ASTRO TECH.)
Catalog Number: 33496
Launch Date: January 23, 2009 0354z
Launch site: Tanegashima Space Center, Japan

Status: Operational

Proposed Frequencies and Modes:
Downlink: 437.505 MHz AFSK/CW
Beacon: 437.505 MHz AFSK/CW

Callsign:

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=101
[02092011]
=====
KAGAYAKI (Solan Co.)
Catalog Number: 33495
Launch Date: January 23, 2009 0354z
Launch site: Tanegashima Space Center, Japan

Status: In Orbit

Downlink: 437.375 MHZ FSK9k6/CW
Beacon: 437.375 MHz FSK9k6/CW

IARU coordination status page:

AMSAT-NA webpage:

[02092011]
=====
STARS (Kagawa Univ.) (Twin Satellites)
Catalog Number: 33498
Launch Date: January 23, 2009 0354z
Launch site: Tanegashima Space Center, Japan

Status: Operational ?

Downlinks: 437.485 MHz FM/CW
437.465 MHz FM/CW
Beacons: 437.305 MHz FM/CW
437.275 MHz FM/CW

Callsigns: JR5YBN
JR5YBO

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=99

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID=121&retURL

=/satellites/status.php
[02092011]
=====
KKS-1 (Tokyo MCIT)
Catalog Number: 33499
Launch Date: January 23, 2009 0354z
Launch site: Tanegashima Space Center, Japan

Status: Operational

Downlink: 437.455 MHz AFSK/CW
Beacon: 437.385 MHz AFSK/CW

Callsign: JQ1YYY

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=107

AMSAT-NA webapge:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID=120&retURL
=/satellites/status.php
[20092011]
=====
PRISM (Tokyo Univ.)
Catalog Number: 33493
Launch Date: January 23, 2009 0354z
Launch site: Tanegashima Space Center, Japan

Status: Operational ?

Downlink: 437.425 MHz AFSK/GMSK/CW
Beacon: 437.250 MHz AFSK/GMSK/CW

Callsign: JQ1YCX

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=97

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID=119&retURL
=/satellites/status.php
[02092011]
=====
RS-30 Radio Sputnik 30 (Yubileiny)
Catalog Number: 32953
Launch Date: May 23, 2008 1520z
Launch site: Plesetsk Missile and Space Complex, Russia

Status: Operational

Curent Modes: Telemetry
Audio
Images

Downlinks: 435.315 MHz
435.215 MHz

AMSAT-NA website:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID=115&ret
URL=/satellites/status.php

Official website:
http://www.npopm.com/?cid=leoca&caid=43
[02092011]
=====
CanX-2
Catalog number: 32790
Launch Date: April 28, 2008 0354z
Launch site: Satish Dhawan Space Centre, India

Status: Operational in range of ground station only

Downlink: 437.478 MHz GFSK

For the latest project status update please visit the Can X-2 web
page: http://www.utias-sfl.net/nanosatellites/CanX2/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=46
[02092011]
=====
AAUSAT-II
Catalog number: 32788
Launch Date: April 28, 2008 0354z
Launch site: Satish Dhawan Space Centre, India

Status: Operational

Downlink: 437.425 MHz 1k2 baud packet

For the latest project status update please visit the AAUSAT-II web
page:
http://www.aausatii.aau.dk/homepage/index.php?language=en&page=home

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=60
[02092011]
=====
CO-65 CUTE-1.7+APD II
Catalog number: 32785
Launch Date: April 28, 2008 0354z
Launch site: Satish Dhawan Space Centre, India

Status: Operational

Downlink: 437.475 MHz 9k6 Packet
Uplink: 1267.600 Mhz

Telemetry Beacon:
Downlink: 437.2750 MHz CW

For the latest project status update please visit the Cute-1.7+APD II
web page: http://lss.mes.titech.ac.jp/ssp/cute1.7/index_e.html

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=78

Command Station blog website:
http://lss.mes.titech.ac.jp/ssp/cute1.7/blog/

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID=112&retURL
=/satellites/status.php
[03232012]
=====
Compass-1
Catalog number: 32787
Launch Date: April 28, 2008 0354z
Launch site: Satish Dhawan Space Centre, India

Status: Operational

Current Mode: dependant on last received command

Uplink: 145.980 MHz FM
Downlink: 437.275 Mhz CW
437.405 MHz Packet

For the latest project status update please visit the Compass 1 web
page: http://www.raumfahrt.fh-aachen.de/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=52

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID=114&retURL
=/satellites/status.php
[06162011]
=====
CO-66 Seeds II
Catalog number: 32791
Launch Date: April 28, 2008 0354z
Launch site: Satish Dhawan Space Centre, India

Status: Operational

Downlink: 437.485 MHz

Callsign: JQ1YGU

For the latest project status update please visit the Seeds 2 web
page: http://cubesat.aero.cst.nihon-u.ac.jp/english/seeds_2_e.html

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=36

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID=113&retURL
=/satellites/status.php
[073092011]
=====
CAPE-1
Catalog Number: 31130
Launch Date: April 17,2007 0702z
Launch site: Baikonur, Kazakhstan

Status: Intermittent

Current Mode: /u

TLM Downlink: 435.245 MHz 9600 bs FSK AX.25
CW Beacon: 435.245 MHz CW

Callsign: K5USL

TLM and CW interchange every 30 seconds.

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID=94&retURL=
/satellites/status.php

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=72
[02092011]
=====
CP3
Catalog Number: 31129
Launch Date: April 17,2007 0702z
Launch site: Baikonur, Kazakhstan

Status: Operational

Current Mode: /u

Downlink: 436.845 MHz 1200 bps AFSK AX.25

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=74
[02092011]
=====
CO-58 CubeSat XI-V
Catalog number: 28895
Launch Date: October 27, 2005 0652z
Launch site: Plesetsk Missile and Space Complex, Russia

Status: Operational - CW Beacon only

Current Mode: /u

Telemetry Downlink: 437.4250 MHz AFSK 1200bps using AFK protocol
Beacon: 437.2750 MHz CW

Callsign: JQ1YGW

Official Webpage: http://www.space.t.u-tokyo.ac.jp/cubesat/mission/V/

Pictures received by Mineo Wakita - JE9PEL:
http://www.ne.jp/asahi/hamradio/je9pel/xivpicte.htm

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=37
[02092011]
=====
CO-57 CubeSat XI-IV
Catalog number: 27848
Launch date: June 30, 2003 1415z
Launch site: Plesetsk Missile and Space Complex, Russia

Status: ?????

Current Mode: /u

Beacon: 436.8475 MHz CW
Telemetry : 437.4900 MHz AFSK 1200 BPS

Callsign: JQ1YGW

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID=96&retURL
=/satellites/status.php

Official Webpage: http://www.space.t.u-tokyo.ac.jp/cubesat/mission/V/
[02092011]
=====
QuakeSat
Catalog Number: 27845
Launch Date: June 30, 2003 1415z
Launch site: Plesetsk Missile and Space Complex, Russia

Status: Telemetry only

Current Mode: 9600 baud data packet

Mode U packet
Downlink: 436.675 MHz 9k6 BPS

Quakesat webpage:
http://www.quakefinder.com/services/quakesat-ssite/
[02252011]
=====
CO-55 Cute-1.7+APD II
Catalog Number: 27844
Launch date: June 30, 2003 1415z
Launch site: Plesetsk Missile and Space Complex, Russia

Status: Operational

Current Mode: CW downlink worldwide
AX25 Packet with uplink command over Japan only

Mode U Telemetry
Downlink: 437.4000 MHz AFSK 1200 BPS

Mode U TLM Beacon
Downlink: 436.8375 MHz CW

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID=69&retURL
=/satellites/status.php

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=78
[02092011]
=====
NO-44 PCSAT
Catalog number: 26931
Launch Date: September 30, 2001 0240z
Launch site: Kodiak Launch Complex, Alaska, USA

Status: Telemetry only

Current Mode: V/v

General Usage Uplink/Downlink: 145.827 MHz 1200 Baud
Special Usage Downlink: 144.390 Mhz 1200 Baud

PCSAT APRS page: http://pcsat.aprs.org

aprstlm Telemetry Decoder program:
http://www.xciv.org/~iain/aprstlm/v1.2/
[02092011]
=====
RS-22 RADIO SPORT 22 (MOZHAYETS 4)
Catalog number: 27939
Launch Date: September 27, 2003 0612z
Launch site: Plesetsk Missile and Space Complex, Russia

Status: Operational - 70cm cw only

Current Mode: /u

CW Beacon - 435.352 MHz
145.818 MHz

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID=76&retURL
=/satellites/status.php
[02092011]
=====
LO-19 LUSAT
Catalog number: 20442

Launch date: January 22, 1990
Launch site: Kourou, French Guiana

Status: CW Beacon only

Uplinks: 145.840 MHz 1200-baud Manchester FSK
145.860 MHz 1200-baud Manchester FSK
145.880 MHz 1200-baud Manchester FSK
145.900 MHz 1200-baud Manchester FSK

CW downlink: 437.125 MHz

Digital downlink: 437.150 MHz SSB (RC-BPSK 1200-baud PSK)

Broadcast Callsign: LUSAT-11
BBS: LUSAT-12

General information and telemetry samples can be found at:
www.telecable.es/personales/ea1bcu
[02092011]
=====
UO-11 OSCAR-11
Catalog number: 14781
Launch Date: March 1, 1984
Launch site: Vandenburg AFB, California, USA

Status: Operational ?

Current Mode: /v

Telemetry Downlink: 145.825 MHz FM 1200 AFSK
UHFBeacon: 435.025 MHz
Mode-S Beacon: 2401.500 MHz

Mode and Antenna Polarization:
V: RHCP
S: LHCP

Webpage: http://www.users.zetnet.co.uk/clivew/
MPEG3 files: http://www.ne.jp/asahi/hamradio/je9pel/uo11tlme.htm
[07052011]
=====
INTERNATIONAL SPACE STATION (ISS) - ARISS
Catalog number: 25544
Launch date: November 20, 1998 0640z (ZARYA module)
Launch sites: Baikonur, Kazakhstan
Kourou, French Guiana
Uchinoura Space Center, Japan
Kennedy Space Center, Titusville, Florida, USA

Status: Operational

Current Active Modes: FM Repeater - OFF
Voice - V/v

BBS - U/u
2m APRS - OFF
70cm APRS - ON
70cm Digi - ON
SSTV - OFF

Expedition 32 Crew (July 2012 - November 2012):
Commander: Gennady Padalka RN3DT
Flight Engineer: Joe Acaba KE5DAR
Flight Engineer: Sergei Revin RN3BS
Flight Engineer: Sunita Williams KD5PLB
Flight Engineer: Yuri Malenchenko RK3DUP
Flight Engineer: Akihiko Hoshide KE5DNI

Available Modes and Frequencies:
Digital/APRS:
Worldwide 2m packet uplink: 145.825 MHz FM 1k2
Worldwide 2m packet downlink: 145.825 Mhz FM 1k2
Worldwide 70cm packet uplink: 437.550 Mhz FM 1k2
Worldwide 70cm packet downlink: 437.550 Mhz FM 1k2

Voice:
Region 1 voice uplink: 145.200 MHz FM
Region 2/3 voice uplink: 144.490 MHz FM
Worldwide downlink: 145.800 MHz FM

Crossband Repeater:
Repeater Uplinks: 1269.650 MHz FM
437.800 MHz FM
145.990 MHz FM - 67.0 PL (Kenwood)
Repeater Downlink: 145.800 MHz FM
437.800 MHz FM (Kenwood)

SSTV Robot 36:
Downlink: 145.800 MHz FM

Mode and Antenna Polarization:
V: Linear
U: Linear

Callsigns:
Belgian: OR4ISS
German: DP0ISS
Russian: RS0ISS
RZ3DZR
United States: NA1SS
2m Packet Mailbox: RS0ISS-11
2m Digipeater alias: ARISS
70cm Packet Mailbox: RS0ISS-1
70cm Digipeater callsign: RS0ISS
70cm Digipeater alias: ARISS

Official ARISS Webpage: http://www.rac.ca/ariss
ISS Fan Club Webpage: http://www.issfanclub.com
APRS tracking page: http://www.ariss.net/

ISS Daily Crew Schedule: http://spaceflight.nasa.gov/station/timelines
Remember that the crew operates on UTC time. Also, all of the time
line is NOT translated from Russian and posted.
[08062012]
NNNN
/EX

SB SAT @ AMSAT W8ISS $WSR-247.S3
WSR 247 Part 3 09/03/2012

AMSAT NEWS SERVICE BULLETIN 247.S3
FROM AMSAT HQ SILVER SPRING, MD, September 03, 2012
TO ALL RADIO AMATEURS
BID: $WSR-247.S3

THE FOLLOWING ARE IN ORBIT BUT ARE NON-OPERATIONAL AT THIS TIME:

NANOSAIL-D
Catalog Number: 37361
Ejection Date: January 17, 2011

Status: Non - Operational

Downlink: 437.270 MHz AX.25

URL: http://nanosaild.engr.scu.edu/dashboard.htm

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=115
[07302012]
=====
HO-68 HOPE-1 (CAS-1) (XW-1)
Catalog Number: 36122
Launch Date: December 15, 2009 0231z
Launch site: Taiyuan Space Center, PRC

Status: Telemetry only

Callsign:
Broadcast: BJ1SA-11
BBS: BJ1SA-12

Uplinks: 145.8250 MHz FM, PL 67.0 Hz.
145.9250 - 145.9750 MHz SSB/CW
145.8250 MHz AFSK 1200 BPS
Downlinks: 435.6750 MHz FM
435.7650 - 435.7150 MHz SSB/CW
435.6750 MHz AFSK 1200 BPS

Beacon: 435.7900 MHz CW

Mode and Antenna Polarization:
V: LHCP 2.0dBi max
U: RHCP 3.0dBi max

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=108

For more information about XW-1 (CAS-1):
http://
[04302012]
=====
SO-67 SumbandilaSat
Catalog Number: 35870
Launch Date: September 17, 2009 1555z
Launch site: Baikonur, Kazakhstan

Status: Non - Operational

Callsign: ZS0SUM

Uplink: 145.875MHz FM tone 233.6 Hz
Downlink: 435.345MHz FM

Mode and Antenna Polarization:
V: Linear
U: Linear

For more information about SO-67:
http://www.amsatsa.org.za/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=88
[01272012]
=====
CP4
Catalog Number: 31132
Launch Date: April 17, 2007

Status: Non-Operational

Current Mode: /u

TLM Downlink: 437.325 MHz 1200 bps FSK AX.25
CW Beacon: 437.325 MHz CW

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=79
[09062010]
=====
LIBERTAD-1
Catalog Number: 31128
Launch Date: April 17, 2007

Status: Non-Operational

Current Mode: V/u APRS Packet ax25

Callsign: 5K3L

Uplink: 145.825 MHz 1200 AFSK ax25 APRS
Downlink: 437.399 MHz 1200 AFSK ax25 APRS

Telemetry Beacon: 437.4050 MHz 1200 AFSK ax25

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=76
[09062010]
=====
PO-63 PEHUENSAT-1
Catalog Number: 29712
Launch Date: January 10, 2007

Status: Non-Operational

Current Mode: V/v

Uplink/Downlink: 145.825 Mhz FM
Voice Recorder: 145.825 Mhz FM

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=51
[09062010]
=====
NCUBE-2
Catalog number: 28897
Launch Date: October 27, 2005

Status: Still attached to XO-53 (SSETI)?

Proposed Callsign: TBA
Proposed Transmit Frequency: 437.305
2407.250

Official Website: http://www.ncube.no

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=24
[09062010]
=====
XO-53 SSETI
Catalog number: 28894
Launch Date: October 27, 2005

Status: Non-operational

Voice Uplink: 437.250 MHz FM 67Hz CTCSS
Voice Downlink: 2401.835 MHz FM
Packet Up/Downlink: 437.250 MHz 9k6 packet
Packet Downlink 2401.835 MHz 38k4 packet

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=54
[09062010]

=====
UWE-1
Catalog Number: 28892
Launch Date: October 27, 2005

Status: Non-Operational

Mode U Telemetry
Downlink: 437.5050 MHz 9600 AFSK

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=53
[09062010]
=====
AO-51 ECHO
Catalog number: 28375
Launch date: June 29, 2004 0745z
Launch site: Baikonur, Kazakhstan

Status: Non - Operational

Current Mode(s):
Voice repeater: V/u
Uplink: 145.880 MHz FM
Downlink: 435.150 MHz FM

Telemetry: Recovery efforts
Downlink: 435.150MHz 9k6

Analog voice downlink: 435.300 MHz FM
435.150 MHz FM
2401.200 Mhz FM
Analog voice uplink: 145.860 MHZ FM
145.880 MHz USB
145.880 MHz FM
145.920 MHz FM
145.920 MHz FM - 67 Hz PL tone burst
1268.705 MHz FM
Digital Downlinks: 435.150 MHz FM 38k4 PBP, 1 watt output
435.150 MHz FM 9k6 Pacsat Broadcast Protocol
2401.200 MHz FM 38k4 bps, AX.25
Digital Uplink: 145.860 MHz FM 9k6 Pacsat Broadcast Protocol
1268.703 mhz FM 9k6 Pacsat Broadcast Protocol
Beacon: 435.150 MHz

Mode and Antenna Polarization:
T: Linear
V: Linear
U: TX A (usually digital)LHCP
TX B (usually analog) RHCP
L: Linear
S: Linear

Broadcast: PECHO-11
BBS: PECHO-12

Official Webpage: http://www.amsat.org/amsat-new/echo/CTNews.php

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=19
[12062011]
=====
CANX-1
Catalog Number: 27847
Launch Date: June 30, 2003

Status: Non-Operational

Downlink: 437.8800 MHz AFSK 1k2bps
[06052009]
=====
DTUSAT
Catalog Number: 27842
Launch Date: June 30, 2003

Status: Non-Operational

Current Mode: 2k4 AFSK Packet last reported

Downlink: 437.475MHz

Officail webpage: http://dtusat1.dtusat.dtu.dk/

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID=101&retURL
=satellites/all_oscars.php
[02212009]
=====
AO-49 AATiS OSCAR-49 (SAFIR-M)
Catalog number: 27605
Launch Date: December 20, 2002

Status: Non-operational.

Uplink: 435.275 MHz 1200-baud AFSK
Downlink: 145.825 MHz 9600-baud FSK
(optional voice message)

Broadcast callsign: DP0AIS

Official webpage: http://amend.gmxhome.de
[01222007]
=====
MO-46 TIUNGSAT-1
Catalog number: 26548
Launch date: September 26, 2000

Status: Telemetry only

Uplinks: 145.850 MHz
145.925 MHz 9600-baud FSK
Downlink: 437.325 MHz

Broadcast callsign: MYSAT3-11
BBS: MYSAT3-12

TiungSat-1 is Malaysia's first micro-satellite and in addition to
commercial land and weather imaging payloads offers FM and FSK
Amateur Radio communication.

TiungSat-1, named after the mynah bird of Malaysia, was developed as
a collaborative effort between the Malaysian government and Surrey
Satellite Technology Ltd.
[03302009]
=====
NO-45 SAPPHIRE
Catalog number: 26932
Launch Date: September 30, 2001

Status: Non-Operational

Downlink: 437.095 MHz 1200 baud AX-25 AFSK
Uplink: 145.945 MHz UI Digipeater
Digi Callsign: KE6QMD

Everyone is welcome to use the digipeating/APRS features of Sapphire,
as per the user service agreement located at the following URL:
http://web.usna.navy.mil/~bruninga/pcsat/contract.txt
[03132005]
=====
SO-42 SAUDISAT-1B
Catalog number: 26549
Launch date: September 26, 2000

Status: Non-Operational

Downlink: 437.075 MHz

Broadcast Callsign: SASAT2-11
BBS: SASAT2-12

Further information is available at:
http://www.amsat.org/amsat/sats/n7hpr/so42.html
[01222007]
=====
SO-41 SAUDISAT-1A
Catalog number: 26545
Launch Date: September 26, 2000

Status: Non-Operational

Uplink: 145.850 MHz
Downlink: 436.775 MHz

Broadcast Callsign: SASAT1-11
BBS: SASAT1-12

Further information is available at:
http://www.amsat.org/amsat/sats/n7hpr/so41.html
[01222007]
=====
AO-40 AMSAT OSCAR 40
Catalog number: 26609
Launch Date: November 16, 2000

Status: Non-Operational

Uplinks

V-band: 145.840 - 145.990 MHz CW/LSB
U-band: 435.550 - 435.800 MHz CW/LSB
L1-band: 1269.250 - 1269.500 MHz CW/LSB
L2-band: 1268.325 - 1268.575 MHz CW/LSB

Downlinks

S2-band: 2401.225 - 2401.475 MHz CW/USB
K-band: 24048.010 - 24048.060 MHz CW/USB
Beacon: 2401.323 MHz
24048.035 MHz

P3-D Telemetry Beacons (IHU)

BEACON General Beacon(GB) Middle Beacon(MB) Engineering Beacon(EB)
2 m none 145.898 MHz none
70cm 435.438 MHz 435.588 MHz 435.838 MHz
13cm(1) 2400.188 MHz 2400.338 MHz 2400.588 MHz
13cm(2) 2401.173 MHz 2401.323 MHz 2401.573 MHz
3cm 10450.975 MHz 10451.125 MHz 10451.375 MHz
1.5cm 24047.885 MHz 24048.035 MHz 24048.285 MHz
[07162007]
=====
OO-38 OPAL
Catalog Number: 26063
Launch Date: January 27, 2000

Status: Non-Operational

Mode U TLM Beacon
Downlink: 437.1000 MHz 9600 FSK
[08132007]
=====
UO-36 UoSAT-12
Catalog number: 25693
Launch date: April 21, 1999

Status: Unknown

Uplink: 145.960 MHz (9600-baud FSK)
Downlinks: 437.025 MHz
437.400 MHz

Broadcast Callsign: UO121-11
BBS: UO121-12

The VK5HI viewer shareware for UO-36 is available on the AMSAT-NA web
site at the following URL:
ftp://ftp.amsat.org/amsat/software/win32/display/ccddsp97-119.zip
[01222007]
=====
SO-35 SUNSAT
Catalog Number: 25636
Launch date:February 23, 1999

Status: Non-Operational

Downlink: Mode B Repeater: 436.291 MHz
Mode J Digipeater: 436.250 MHz

Uplinks: Mode B Repeater: 145.825 MHz
Mode J Digipeater: 145.825 MHz
145.900 MHz

For more information of SUNSAT vist the satellite web site:
http://esl.ee.sun.ac.za/projects/sunsat/
[01222007]
=====
PO-34 PANSAT
Catalog number: 25520
Launch date: October 30, 1998

Status: Telemetry downloads only

Uplink/downlink: 436.500 MHz

Official Webpage: http://www.sp.nps.navy.mil/pansat/
[05092004]
=====
SO-33 SEDSAT-1
Catalog number: 25509
Launch date: October 24, 1998

Status: Semi-operational

Downlink: 437.910 MHz FM (9600-baud FSK)

The satellite is not currently available for uplink transmissions and
the image and transponder recovery efforts have been unsuccessful.

For more information on SedSat-1 visit the satellite web site:
http://seds.uah.edu/projects/sedsat/sedsat.htm
[09042006]
=====

GO-32 Gurwin TechSat-1B
Catalog number: 25397
Launch Date: July 10, 1998

Status: Non-Operational

Current Modes:
Telemetry : /u

Downlink: 435.225 MHz FM (9600-baud FSK)
435.325 Mhz - Not Available - temperature problems
Uplinks: 145.850 FM
145.890 FM
145.930 FM
1269.700 FM
1269.800 FM
1269.900 FM

Broadcast Callsign: 4XTECH-11
BBS Callsign: 4XTECH-12

More information of GO-32 can be found at:
http://asri.technion.ac.il/techsat/

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID=14&retURL
=/satellites/status.php
[07172010]
=====
TO-31 TMSAT-1
Catalog number: 25396
Launch Date: July 10, 1998

Status: Non-operational

Uplink: 145.925 MHz 9600 baud FSK
Downlink: 436.925 MHz 9600 baud FSK

Broadcast callsign: TMSAT1-11
BBS: TMSAT1-12
[05012006]
=====
MO-30 UNAMSAT-2
Catalog Number: 24305
Launch Date: September 5, 1996

Status: Non-operational

Downlink: 435.1380 MHz AFSK 1200 BPS
Downlink: 435.2060 MHz AFSK 1200 BPS
Uplink: 145.8150 MHz AFSK 1200 BPS
Uplink: 145.8350 MHz AFSK 1200 BPS
Uplink: 145.8550 MHz AFSK 1200 BPS
Uplink: 145.8750 MHz AFSK 1200 BPS

[06042009]
=====
PO-28 POSAT-1
Catalog number: 22829
Launch Date: September 25, 1993

Status: Non-operational

Downlink: 429.950
Uplink: Not until handover back to Amatuer usage

Broadcast callsign: POSAT1-11
BBS callsign: POSAT1-12

AMSAT Webpage: http://www.amsat.org/amsat/sats/n7hpr/po28.html
POSAT-1 webpage:
http://www.ee.surrey.ac.uk/SSC/CSER/UOSAT/missions/posat1.html
[01012009]
=====
IO-26 ITAMSAT
Catalog number: 22826
Launch Date: September 26, 1993

Status: PSK carrier only

Current Mode:

Uplinks: 145.875 MHz FM 1200-baud
145.900 MHz FM 1200-baud
145.925 MHz FM 1200-baud
145.950 MHz FM 1200-baud

Downlink: 435.808 MHz PSK

Broadcast Callsign: ITMSAT-11
BBS: ITMSAT-12

Official webpage: http://www.itamsat.org
AMSAT Webpage: http://www.amsat.org/amsat/sats/n7hpr/io26.html
[01212007]
=====
KO-25 KITSAT
Catalog number: 22828
Launch date: September 26, 1993

Status: Non-operational

Uplink: 145.980 MHz FM 9600-baud FSK
Downlink: 436.500 MHz FM

Broadcast Callsign: HL02-11
BBS: HL02-12
[05092004]
=====

AO-24 ARSENE
Catalog Number: 22654
Launch Date: May 13, 1993

Status: Non-operational

Uplink: 435.0625 MHz FM 1k2bps AFSK
435.1125 MHz FM 1k2bps AFSK
435.1375 MHz FM 1k2bps AFSK
Downlink: 145.9750 MHz FM 1k2bps AFSK
2446.5025 MHz FM 1k2bps AFSK

Beacon: 2446.4700 MHz CW

Broadcast callsign:
BBS:
[12162009]
=====
KO-23 KITSAT
Catalog number: 22077
Launch date: August 10, 1992

Status: Non-operational

Uplink: 145.900 MHz FM (9600-baud FSK)
Downlink: 435.170 MHz FM

Broadcast Callsign: HLO1-11
BBS: HLO1-12
[01222007]
=====
UO-22 UOSAT
Catalog number: 21575
Launch date: July 17, 1991

Status: Non-Operational

Uplink: 145.900 FM 9600-baud FSK
Downlink: 435.120 MHz FM

Broadcast Callsign: UOSAT5-11
BBS: UOSAT5-12
[01222007]
=====
AO-21 AMSAT-OSCAR 21
Catalog Number: 21087
Launch Date: January 29, 1991

Status: Non-Operational

Uplink: 435.041 MHz FM DSP
Downlink: 145.983 MHz FM DSP
[01222007]
=====

FO-20 JAS-1b
Catalog number: 20480
Launch Date: February 07, 1990

Status: Non-Operational

Beacons: 435.795 MHz CW
435.910 MHz AX25

Voice Transponder:
Uplink: 145.900 to 146.000 MHz CW/LSB
Downlink: 435.800 to 435.900 MHz CW/USB

Digital Transponder:
Uplinks: 145.850 MHz
145.870 MHz
145.890 MHz
145.910 MHz
Downlink: 435.910 MHz

More FO-20 info can be found at:
http://www.amsat.org/amsat/sats/n7hpr/fo20.html
[01152007]
=====
WO-18 WEBERSAT
Catalog Number: 20441
Launch Date: January 22, 1990

Status: Non-Operational

Downlink: 437.104 MHz SSB 1200 Baud PSK AX.25
[05012006]
=====
DO-17 Dove
Catalog Number: 20440
Launch Date: January 22, 1990

Status: Non-operational.

Downlink: 145.825 MHz FM 1200 Baud AFSK
Beacon: 2401.220 MHz
[05012006]
=====
AO-16 PACSAT
Catalog number: 20439
Launch Date: January 22, 1990

Status: non-operational

Current Mode: V/u

Uplink: 145.900 MHz FM 1200-baud Manchester FSK (reserved)
145.920 MHz FM VOICE
145.940 MHz FM 1200-baud Manchester FSK (reserved)

145.960 MHz FM 1200-baud Manchester FSK (reserved)

Downlink: 437.026 MHz USB VOICE
(1200-baud PSK - MBL Telemetry Only)

Mode-S Beacon: 2401.1428 MHz [NO FUTURE OPERATIONS PLANNED]

Mode and Antenna Polarization:
U: RC 437.050 MHz RHCP
PSK 437.026 MHz LHCP
V: Linear

Broadcast Callsign: PACSAT-11
BBS: PACSAT-12

AO-16 AMSAT Webpage: http://www.amsat.org/amsat/sats/n7hpr/ao16.html
[07242009]
=====
UO-15 UoSAT-4
Catalog Number: 20438
Launch Date: January 22, 1990

Status: Non-operational

Uplink: ?
Downlink: 435.1250MHz (?)
435.1200MHz (?)
[06042009]
=====
UO-14 UoSAT-3
Catalog number: 20437
Launch date: January 22, 1990

Status: Non-operational

Uplink: 145.975 MHz FM
Downlink: 435.070 MHz FM
[05092004]
=====
FO-12 Fuji-OSCAR 12
Catalog Number: 16909
Launch Date: August 12, 1986

Status: Non-Operational

Mode V/U (J) Linear Transponder (Inverting):
Uplink: 145.9000 - 146.0000 MHz SSB/CW
Downlink 435.8000 - 435.9000 MHz SSB/CW

Mode V/U (J) Packet:
Uplink: 145.8500 MHz MFSK 1200 BPS
Uplink: 145.8700 MHz MFSK 1200 BPS
Uplink: 145.8900 MHz MFSK 1200 BPS
Uplink: 145.9100 MHz MFSK 1200 BPS

Downlink 435.9100 MHz PSK 1200 BPS

Telemetry Beacon: 435.7950 MHz SSB/CW
[01152007]
=====
AO-10 OSCAR 10
Catalog number: 14129
Launch Date: June 16, 1983

Status: Non-operational

Uplink: 435.030 to 435.180 MHz CW/LSB
Downlink: 145.975 to 145.825 MHz CW/USB

Beacon: 145.810 MHz (unmodulated carrier)

W4SM has more information about the satellite at the following URL:
http://www.cstone.net/~w4sm/AO-10.html
[05092004]
=====
AO-8 AMSAT-OSCAR 8
Catalog Number: 10703
Launch Date: March 3, 1978

Status: Non-Operational

Mode V/U (J) Linear Transponder (Non-Inverting): Non-Operational
Uplink: 145.9000 - 146.0000 MHz SSB/CW
Downlink 435.1990 - 435.2000 MHz SSB/CW

Mode V/U (J) TLM Beacon: Non-Operational
Downlink 435.0950 MHz CW

Mode V/A (A) Linear Transponder (Non-Inverting): Non-Operational
Uplink: 145.8500 - 145.9000 MHz SSB/CW
Downlink 29.4000 - 29.5000 MHz SSB/CW

Mode V/A (A) TLM Beacon: Non-Operational
Downlink 29.4020 MHz CW
[01152007]
=====
AO-6 AMSAT-OSCAR 6
Catalog Number: 06236
Launch Date: October 15, 1972

Status: Non-Operational

Uplink: 145.9000 - 146.0000 MHz SSB/CW
Downlink: 29.4500 - 29.5500 MHz SSB/CW
Beacons: 29.450 MHz
435.100 MHz
[01312008]
=====
AO-5 Australis-OSCAR 5
Catalog Number: 04321

Launch Date: January 23, 1970

Status: Non-Operational

Telemetry Beacons: 144.0500 MHz CW
29.4500 MHz CW
[01152007]
=====
OSCAR III
Catalog Number: 01293
Launch Date: March 09, 1965

Status: Non-Operational

Uplink: 145.9750 - 146.0250 MHz SSB/CW
Downlink: 144.3250 - 144.3750 MHz SSB/CW
[01012007]
=====
RS-15 RADIO SPORT RS-15
Catalog number: 23439
Launch Date: December 26, 1994

Status: Non-operational

Uplink: 145.858 to 145.898 MHz CW/USB
Downlink: 29.354 to 29.394 MHz CW/USB

Beacon 1: 29.352 MHz (intermittent)
Beacon 2: 29.398 MHz

SSB meeting frequency: 29.380 MHz (unofficial)
[06202004]
=====
RS-13 RADIO SPORT RS-13
Catalog number: 21089
Launch date: February 5, 1991

Status: Non-operational

Uplink: 21.260 to 21.300 MHz CW/USB
Downlink: 145.860 to 145.900 MHz CW/USB

Beacon: 145.860 MHz

Robot: 145.908 MHz
[05232004]
=====
RS-12 RADIO SPORT RS-12
Catalog number: 21089
Launch date: February 5, 1991

Status: Non-operational

Uplink: 21.210 to 21.250 MHz CW/USB
Downlink: 29.410 to 29.450 MHz CW/USB

Beacon: 29.408 MHz

Robot: 29.454 MHz
[05232004]
NNNN
/EX

SB SAT @ AMSAT W8ISS $WSR-247.S4
WSR 247 Part 4 09/03/2012

AMSAT NEWS SERVICE BULLETIN 247.S4
FROM AMSAT HQ SILVER SPRING, MD, September 03, 2012
TO ALL RADIO AMATEURS
BID: $WSR-247.S4

THE FOLLOWING SATELLITES HAVE RE-ENTERED OR HAVE BEEN RETURNED SAFELY:

ARISSat-1
Catalog number: 37772
Launch date: August 03, 2011 1843z
Launch site: International Space Station

Status: Re-entered January 05, 2012

Callsign: RS01S

Current Mode(s):
Linear Transponder: U/v
Uplink: 435.758 to 435.742 MHz CW/LSB
Downlink: 145.922 to 145.938 MHz CW/USB

FM Telemetry/SSTV/Messages/ID:
Downlink: 145.950 MHz FM

Telemetry/Beacon:
Downlink: 145.939 MHz CW1
145.919 MHz CW2
145.920 MHz 1k BPSK USB
145.920 MHz 400b BPSK USB

Official Webpage:http://www.amsat.org/amsat-new/ARISSat/ARISSat.php

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/informal_detail.php?serialnum=89
[01052012]
=====
CAERUS
Catalog Number:
Launch Date: December 08, 2010 15:43:00 UTC
Launch site: Kennedy Space Center, Titusville, Florida, USA

Status: Re-entered December 22, 2010

Uplink:
Downlink: 437.600 MHz 1k2 AX.25

Beacon: 437.600 MHz CW

Callsign: KJ6FIX

URL:
http://www2.isi.edu/research/prj-serc/prj-serc_projects/prj-serc_projects-8.
htm

IARU coordination status page:

[11102011]
=====
CO-56 CUTE-1.7 + APD
Catalog number: 28941
Launch date: February 21, 2006

Status: Re-entered
Re-entered: October 25, 2009

Uplink: 1268.5000 MHz GMSK 9600 BPS
Downlink: 437.4700 MHz 1200 FM ax25 or SRLL (ACTIVE only near Japan?)

Telemetry Beacon: 437.3850 CW
Callsign: JQ1YPC

Information webpage:
http://lss.mes.titech.ac.jp/ssp/spacerium/cute1blog/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=56
[09062010]
=====
BEVO-1 (DRAGONSAT-1)
Catalog Number: 35690
Launch Date: May 19, 2009

Status: Re-entered
Re-entered:

Downlink: 437.325 MHz 9k6 GMSK
437.325 MHz CW 20wpm

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=117
[07312009]
=====
AggieSat2 (DRAGONSAT-2)
Catalog Number: 35690
Launch Date: May 19, 2009

Status: Re-entered
Re-entered:

Downlink: 436.250 MHz 9k6 FHSS
[11112009]
=====

Pollux
Catalog Number: 35693
Launch Date: July 31, 2009

Status: Re-entered
Re-entered:

Callsign: POLLUX-1

Downlink: 145.825MHz 1k2 AX.25

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=139
[09062010]
=====
Castor (ANDE-2)
Catalog Number: 35694
Launch Date: July 31, 2009

Status: Re-entered
Re-entered:

Callsign: KD4HBO-1

Downlink: 145.825 MHz 1k2 AX.25

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=144
[09062010]
=====
NO-62 FCAL
Catalog Number: 29667
Launch Date: December 21, 2006

Status: Re-Entered
Re-entered: July 28, 2008

Downlink: 437.385 Mhz APRS AX25

Downlink ID: KD4HBO

Website: http://eng.usna.navy.mil/~bruninga/fcal.html

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=59
[01012009]
=====
NO-61 ANDE
Catalog Number: 29664
Launch Date: December 21, 2006

Status: Re-Entered
Re-entered: December 25, 2007

Uplink/Downlink: 145.825 Mhz FM APRS AX25
[01032008]
=====
NO-60 RAFT-1
Catalog Number: 29661
Launch Date: December 21, 2006

Status: Re-Entered
Re-entered: May 30, 2007

Main Downlink: 145.825 Mhz FM APRS AX25
APRS Uplink: 145.825 MHz FM APRS AX25
Voice/PSK31 Uplink: 28.120 MHz

Packet to Voice ID: RAFT
[06112007]
=====
GENESAT-1
Catalog Number: 29655
Launch Date: December 16, 2006

Status: Re-Entered
Re-entered date: August 8, 2010

Current Mode: /u

Callsign: KE7EGC

Telemetry Beacon Downlink: 437.0695 MHz AFSK 1200 BPS

Official webpage: http://www.crestnrp.org/genesat1/ahc.html
[08082010]
=====
HO-59 HITSat
Catalog number: 29484
Launch date: September 22, 2006

Status: Re-Entered
Re-entered: June 18, 2008

Telemetry Downlink: 437.4250 MHz AFSK 1200 BPS
Beacon: 437.2750 MHz CW

Callsign: JR8YJT
[01012009]
=====
SO-43 Starshine 3
Catalog Number: 26929
Launch Date: September 30, 2001

Status: Re-Entered
Re-entered: January 21, 2003

Beacon: 145.825Mhz
[02212009]

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/EX

ANS is released worldwide via the AMSAT ANS e-mail reflector and a live radiocast on the AMSAT-NA 20-meter net held each Sunday on 14.282 MHz. Pre-net operations start at 18:00 UTC, with current ANS bulletins transmitted to the eastern U.S. at 19:00 UTC and to the western U.S. at 19:30 UTC.

Information on AMSAT-NA is available at the following URL:
http://www.amsat.org

Mailing address:
AMSAT-NA
850 Sligo Avenue, Suite 600
Silver Spring, Maryland 20910-4703

Voice: 301-589-6062
888-322-6728
FAX: 301-608-3410

Currently, AMSAT-NA supports the following (free) mailing lists:

* AMSAT News Service (ANS)
* General satellite discussion (AMSAT-BB)
* Orbit data (KEPS)
* Manned space missions (SAREX)
* District of Columbia area (AMSAT-DC)
* New England area (AMSAT-NE)
* AMSAT Educational Liaison mailing list (AMSAT-EDU)
* AMSAT K-12 Educational Liaison mailing list (AMSAT-K12)

A daily digest version is available for each list.

To subscribe, or for more list information, visit the following URL:
http://www.amsat.org/mailman/listinfo/ans

In addition to regular membership, AMSAT-NA offers membership in the President's Club. Members of the President's Club, as sustaining donors to AMSAT Project Funds, will be eligible to receive additional benefits. Application forms are available from the AMSAT-NA Office.

This week's Weekly Satellite Report Editor is James French, W8ISS.

ANS is always dedicated to past ANS editor 'BJ' Arts, WT0N, and to the memory of longtime AMSAT supporters Werner Haas, DJ5KQ, Dennis Kitchen, G0FCL and John Branegan GM4IHJ.

Please send any amateur satellite news or reports to: ans-editor{at}amsat.org
NNNN
/EX

131. ANS-253 AMSAT News Service Weekly Bulletins

Newsgroup: rec.radio.amateur.space
Date: 2012-09-09 01:37:04 UTC
From: JoAnne Maenpaa <k9jkm@comcast.net>
Message-ID: <002201cd8e2b$991af0f0$cb50d2d0$@net>
Source record: 231
Cross-posted to: rec.radio.amateur.space,rec.radio.info

AMSAT NEWS SERVICE
ANS-253

ANS is a free, weekly, news and information service of AMSAT North America, The Radio Amateur Satellite Corporation. ANS reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in designing, building, launching and communicating through analog and digital Amateur Radio satellites.

Please send any amateur satellite news or reports to:
ans-editor at amsat.org

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* Reminder: Ballots for the AMSAT-NA Board of Directors Election *
* are due by mail by the close of business on Sepetember 15, 2012 *
****

In this edition:

* AMSAT President Barry Baines, WD4ASW TV Interview on HAMRADIONOW.tv
* Board of Directors Ballots Due by September 15
* Register On-line for the AMSAT 2012 Space Symposium
* Final Call - AMSAT 2012 Space Symposium Papers Due October 1
* Israeli Students Developing Duchifat-1 145.825 MHz APRS CubeSat
* Astronaut EVA Activity Delays ISS CubeSat Deployment Schedule
* ELaNa Cubesats to Launch From Vandenberg September 13 - Thursday!
* AMSAT Store Grand Reopening
* Successful ARISS Contacts With Germany, Japan, and Maryland
* September 9 Launch From India Planned for Japan PROITERES Satellite
* Help Wanted: AMSAT News Service Rotating Editor Positions Available
* Satellite Shorts From All Over

SB SAT @ AMSAT $ANS-253.01
ANS-253 AMSAT News Service Weekly Bulletins

AMSAT News Service Bulletin 253.01
>From AMSAT HQ SILVER SPRING, MD.
September 9, 2012
To All RADIO AMATEURS
BID: $ANS-253.01

AMSAT President Barry Baines, WD4ASW TV Interview on HAMRADIONOW.tv

Gary Pearce, KN4AQ, producer and host of the HAMRADIONOW.tv webcasts interviewed AMSAT President Barry Baines, WD4ASW at the Shelby North Carolina Hamfest. Barry's interview provides an in-depth update on AMSAT activities and plans.

As Gary says, "So there's a lot going on at AMSAT. Exciting stuff like commanding a remote-control vehicle with instructions relayed through the ISS (think Mars Curiosity Rover)". As Barry said, "This isn't your grandfather's AMSAT anymore".

Barry discussed AMSAT's exciting projects including:

+ Project Fox Cubesat development
+ AMSAT selection for NASA's ELaNa launch program
+ AMSAT development of missions meeting STEM educational goals
+ AMSAT-ARRL-ARISS teamwork
+ Future opportunities in space
+ How you can join and help

Watch the 60 minute interview at HAMRADIONOW.tv, Episode 19: http://arvideonews.com/hrn/HRN_Episode_0019.html

While you are on the Amateur Radio Video News website please "click the pig" if you can donate to this amateur radio video series.

[ANS thanks Gary Pearce, KN4AQ and Amateur Radio Video News for the above information]

Board of Directors Ballots Due by September 15

If your ballot for the 2012 AMSAT Board of Directors election has not hit the mail yet you gotta do it today!

AMSAT Corporate Secretary Alan Biddle, WA4SCA reminds all AMSAT-NA members, "Your ballots for the 2012 Board of Directors election need to be received at AMSAT-NA headquarters by September 15th, 2012. This is one of your best opportunities to make your views on the path of our organization known."

Ballots for the 2012 AMSAT-NA Board of Directors election have been mailed to all members. Also included is biographical information about each of the candidates.

Select no more than three of the six listed candidates (in alphabetical order):

+ Tom Clark, K3IO
+ Steve Coy, K8UD
+ Mark Hammond, N8MH
+ Lou McFadin, W5DID
+ Gould Smith, WA4SXM
+ Patrick E. Stoddard, WD9EWK

The 3 candidates receiving the most votes will become directors serving 2 year terms. The 2 receiving the next highest number of votes will be seated as alternates for 1 year terms.

You must mail your ballot back to be received at the AMSAT-NA Office no later than the close of business on September 15, 2012:

AMSAT
850 Sligo Avenue, #600
Silver Spring, MD 20910

[ANS thanks AMSAT Corporate Secretary Alan Biddle, WA4SCA for the above information]

Register On-line for the AMSAT 2012 Space Symposium

AMSAT announces that the registration for the 2012 AMSAT Space Symposium, to be held on Friday, October 26th through Sunday, October 28th is now open on-line. A mail-in option is also available those preferring this approach.

See the AMSAT Web Store to complete your on-line registration:
http://store.amsat.org/catalog/index.php?cPath'

Downloadable paper registration forms in MS-Word format and PDF format are available on the 2012 Symposium page:
http://www.amsat.org/amsat-new/symposium/2012/index.php

Prices for the Symposium are:
+ Symposium Registration including Proceedings
o Through September 23, 2012: $ 45.00
o Starting September 24, 2012: $ 50.00
o At the Door: $ 55.00

+ Saturday Evening Banquet $ 45.00

+ Sunday Morning Area Coordinators' Breakfast $ 15.00

+ Monday (Oct 29) bus trip to KSC and entrance ticket $ 100.00

The Symposium weekend will feature:

+ Space Symposium with Amateur Satellite Presentations
+ Operating Techniques, News, & Plans from the Amateur Satellite World
+ Board of Directors Meeting open to AMSAT members
+ Meet Board Members and Officers
+ Annual General Membership Meeting
+ Annual Banquet-Keynote Speaker and Door Prizes

The Symposium Hotel is the Holiday Inn at Orlando-International Airport is located one mile from the Orlando International Airport (MCO). The AMSAT discount rate is $99 + taxes per night. The reservation block code used when calling the hotel directly is AMT.

The hotel telephone number is 407-851-6400. The Symposium Committee recommends you make reservations by calling the hotel directly rather than through the Web. Cutoff date for reservations is Oct 6, 2012. The direct link to the hotel web page is: http://www.holidayinn.com/hotels/us/en/orlando/mcoap/hoteldetail

The hotel offers free Internet connection and free airport shuttle. When you arrive at the Orlando Airport call 407-709-5310 to request the shuttle.

The Orlando International Airport (MCO) is the closest to the Symposium and is served by most major air carriers. The hotel address is: 5750 T.G. Lee Blvd • Orlando, FL 32822. A map link is included on the hotel web page.

[ANS thanks the 2012 Symposium Committee for the above information]

Final Call - AMSAT 2012 Space Symposium Papers Due October 1

Symposium Proceedings Editor, Dan Schultz, N8FGV reminds authors the final copy of your paper for the 2012 Space Symposium is due by October 1, 2012. Dan requests a tentative title of your presentation as soon as possible, with final copy to be by October 1 for inclusion in the printed proceedings. Abstracts and papers should be sent to Dan Schultz, N8FGV, at n8fgv at amsat.org

Proposals for papers, symposium presentations and poster presentations are invited on any topic of interest to the amateur satellite community:

+ Papers for publication in the Proceedings

+ Symposium Presentations

+ Poster Presentations

+ Equipment and Operating Demonstrations

The Symposium Committee still has prime slots available on the speaker's schedule. The AMSAT Symposium depends on YOU to make it happen, without speakers there is no Symposium.

Please consider doing a presentation, even if you have never done so in the past. We are especially interested in papers and presentations involving our educational partnerships with K-12 and university level classrooms. Education is quickly becoming critical for our future rides to space.

[ANS thanks 2012 Symposium Proceedings Editor Dan Schultz, N8FGV for the above information]

Israeli Students Developing Duchifat-1 145.825 MHz APRS CubeSat

The SpaceDuchifat-1 is an experimental and educational CubeSat developed and built by young Israeli students at the Space Laboratory of the Herzliya Science Centre (HSC). The project is directed by Dr. Ana Heller with support from the Herzliya city municipality and the Israeli Amateur Radio Club.

The CubeSat will carry an APRS digipeater operating on 145.825 MHz and a UHF/VHF 1200 bps BPSK transceiver that can provide a CW beacon and an FM to DSB transponder.

The main mission of the satellite is to transmit real-time information via radio amateur packets from a Low Earth Orbit (LEO) using the Automatic Position Reporting System (APRS) protocol. Duchifat-1 will allow remote traveler's to access the satellite for worldwide position/status reporting and messaging even in the case of using simple handheld or mobile radios with Omni-directional whip antennas.

Due to the lack of APRS digipeating coverage on the 145.825 MHz frequency remote travelers, ships at sea, and stations in many parts of the world are presently unable to use the APRS system. The Duchifat-1 satellite will augment the existing worldwide terrestrial Amateur Radio APRS by adding LEO satellite coverage along with the International Space Station APRS digipeater.

Real-time position reporting uses the Global Positioning System (GPS) of the groundstation and will allow transmission of a wide variety of data including short text messages and telemetry data. The reports will be combined with a computer and mapping software to display the data superimposed on maps at a HSC Ground Station.

No launch or orbit details are presently available.

Further information at http://www.madaim.org.il/hsl/php/index-en.php

[ANS thanks HSL Space Laboratory at the Herzliya Science Center in Israel for the above information]

Astronaut EVA Activity Delays ISS CubeSat Deployment Schedule

A critical EVA was conducted at the International Space Station on Wednesday, September 5 by Astronauts Sunita Williams (KD5PLB) and Akihiko Hoshide (KE5DNI) to complete the installation of a spare power unit on the station's truss, which caused problems during an August 30 spacewalk.

During the August 30 EVA Williams and Hoside spent 8 hours and 17 minutes in space, but failed to install a new Main Bus Switching Unit (MBSU) on the station's s-zero truss as they had difficulties driving the bolts to secure the equipment. The MBSU is a heavy component that is used to relay power from the station's solar arrays to its systems.

This additional EVA activity drove schedule changes in which JAXA announced that the deployment of five CubeSats from the ISS planned for September 10 has been postponed. A new deployment date has not yet been announced.

Four of the CubeSats carry Amateur Radio payloads, they are F-1, FITSAT-1, WE-WISH and TechEdSat. Please refer to ANS-197 for the detailed list of CubeSat radio frequencies and operating modes: http://amsat.org/pipermail/ans/2012/000634.html

The CubeSats are mounted in a JEM-Small Satellite Orbital Deployer (J-SSOD). In one pod are FITSAT-1, TechEdSat and F-1 and in the second pod is WeWish and a scientific 2U CubeSat RAIKO. Japanese astronaut Akihiko Hoshide KE5DNI will use the ISS Kibo robot arm to deploy the pods as demonstrated in this YouTube video: http://www.youtube.com/watch?feature&#65533;ayer_embedded&v&#65533;uewuyv0wM

ELaNa Cubesats to Launch From Vandenberg September 13 - Thursday!

The Atlas V NROL-36 launch from Vandenberg Air Force Base in California, originally planned for August is now ready for launch on September 13. Liftoff is planned during a period between 1:45 and 4:15 p.m. local PDT (4:45-7:15 p.m. EDT; 2045-2315 GMT).

This launch will be carrying a pair of ocean surveillance satellites to locate ships at sea. Also aboard this flight at four cubesats as part of ELaNa IV mission and seven cubesats for government missions.

The ELaNa Cubesats aboard are:
+ CINEMA (Cubesat for Ion, Neutral, Electron, Magnetic fields)
o Downlinks for engineering telemetry and command are in the 2400-2450 MHz range; Science telemetry is in 2200-2300 MHz range.

+ CSSWE (Colorado Student Space Weather Experiment)
o Downlink 437.345 MHz, 9k6 with AX25

+ CP5 (PolySat)
o Downlink 437.405 MHz at 1 watt, AFSK on LSB AX.25 over NRZI at 1200 baud, every 2 minutes, begins 3.5 hours after first turn-on.

+ CXBN (Cosmic X-Ray Background Nanosatellite)
o Downlink 437.525 MHz, GFSK, AX.25

The US Government Satellites aboard are:
+ Aeneas
o First cubesat to deploy 2.4 GHz Dish Antenna. WIFI transmitter will transmit on 2425.0 MHz with 1 watt of output power.
o Downlink 437.600 MHz AX25 1200 bps beacon every 10 seconds and spread spectrum two-way link elsewhere in the 70cm band.
o Will test a 20-inch mesh antenna to track electronic tags on shipping containers in the open ocean.

+ ORSES (ORS Enabler Satellite)
+ Horus
+ Re
o Will be used for the optical tracking of space debris
+ Aerocube 4A, 4B, 4C
o Testing deployable solar panels.
o Technology demonstration of parachute-like devices to deorbit satellites.
o Testing closed-loop attitude control system based around a three-axis gyroscope.

A discussion of the launch re-scheduling can be found on-line at:
http://www.nasaspaceflight.com/2012/08/uatlas-v-launch-nrol-36-vandenberg/

Please refer to the prior bulletin for mission summaries and satellite team web pages: http://amsat.org/pipermail/ans/2012/000637.html

A detailed article of the launch can be found on-line at:
http://www.americaspace.org/?p#568

[ANS thanks NASA, the CubeSat Teams noted above, AMSAT-UK, Gunter's Space Page and nasaspaceflightnow.com for the above information]

AMSAT Store Grand Reopening

The AMSAT Store is fully open for business after being updated. All the usual AMSAT software, hardware, and clothing are available, as is the registration for the AMSAT 2012 Symposium and activities:
http://store.amsat.org/catalog/index.php?cPath'

Please stop by, even if you are just looking:
http://store.amsat.org/catalog/

You can also find a link to the AMSAT Store from the main web page at: http://www.amsat.org. It is the bottom button on the list on the left side of the main page.

If you don't find what you are looking for here, contact Martha at the main office:

+ E-mail at martha@amsat.org
+ From the US call toll free at (888) 322-6728
+ From all other locations call (301) 589-6062
+ Fax (301) 608-3410
+ Regular mail: AMSAT, 850 Sligo Ave. Suite 600, Silver Spring, MD 20910

[ANS thanks Alan Biddle, WA4SCA for tha above information]

Successful ARISS Contacts With Germany, Japan, and Maryland

Astronaut Akihiko Hoshide, KE5DNI participated in two ARISS (Amateur Radio on the International Space Station) contacts over the past week. He spoke with students attending Megina Gymnasium Mayen in Mayen, Germany on Friday, August 31 and with youth from the Iruma Junior Ham Club in Iruma, Japan on Sunday, September 2.

Sunita Williams, KD5PLB picked up a third ARISS contact with the National Electronics Museum in Linthicum, Maryland on Saturday, September 1. The radio contacts were integrated into comprehensive science and math lessons.

[ANS thanks Carol Jackson, KB3LKI, for the above information]

September 9 Launch From India Planned for Japan PROITERES Satellite

The Japanese amateur radio satellite PROITERES is planned to launch Sunday, September 9 at 0421 UT from the Indian Space Research Organisation (ISRO) Satish Dhawan space centre. The satellites SPOT6 and mRESINS will be on the same launch into a 695 km • 695 km, 98.2• inclination orbit.

PROITERES was built by a team of students and faculty members of Osaka Institute of Technology (OIT) and the spacecraft aims to demonstrate powered flight using a Pulsed Plasma Thruster (PPT) engine. Its amateur radio callsign is JL3YZK.

PROITERES stands for PRoject of OIT Electric-Rocket-Engine Onboard Small Space Ship and will transmit on 437.485 MHz FM/AFSK. The spacecraft carries a camera and the two CPU•s run the Linux operating system.

PROITERES, Osaka Institute of Technology, Japan
Launch : 9 Sep 2012 4:21UTC (9:51IST)
Vehicle: PSLV-CA with SPOT6 and mRESINS
Site : Satish Dhawan Space Centre, Sriharikota, India
30cm^3, 10kg, 10W, 437.485MHz FM/AFSK

The PROITERES Google English website contains the most up-to-date information see http://tinyurl.com/PROITERES-Satellite

There is also an English language website at
http://www.oit.ac.jp/elc/~satellit/ImageProiteres.html

A video showing ISRO launch prepartion for PROITERES can be found at:
http://www.uk.amsat.org/10201

[ANS thanks Mineo Wakita, JE9PEL and AMSAT-UK for the above information]

Help Wanted: AMSAT News Service Rotating Editor Positions Available

The AMSAT News Service (ANS) is responsible for researching, writing, editing, and publishing the weekly amateur satellite news bulletins.

After the passing of Dee, NB2F, we currently have a two editors who take a turn weekly to publish the bulletins. With the addition of a volunteer, or two, this would generally involve taking a turn about every 3 to 4 weeks.

At present we a looking for interested satellite enthusiasts to join the ANS editorial team. Professional writing/editing experience is NOT a requirement. Your interest and enthusiasm in following and reporting on amateur radio in space will get you started! The ANS Editor team helps each other by rounding up items of interest. Plus we receive submitted items for publication ... so you won't be left all alone!

If you can commit to working on the bulletins for a week on a rotating basis please reply via e-mail to AMSAT News Service Editor JoAnne Maenpaa, K9JKM via k9jkm at amsat.org.

[ANS thanks AMSAT Vice-President User Services, Gould Smith, WA4SXM for the above information]

Satellite Shorts From All Over

+ Listen for Tom Deeble, KA6SIP operating on FO-29, SO-50, and AO-27 satellites from the north shore of Kauai in the Hawaiian Islands. Tom is running a dual FT-817 setup with an Arrow antenna and ARR 440 preamp. Since this is a family trip he will try to operate on satellites in his spare time. He will be on Kauai until Friday, September 14.

+ Plan ahead! Scouting's Jamboree on the Air is coming up the weekend of October 20. If you know of local scout groups latch on to them and hopefully let's make the satellites come alive with Scout to Scout contacts. It may end up being the high point for many of the Scouts involved with JOTA. (Tom Schuessler, N5HYP)

+ Congratulations Bob Bruninga, WB4APR as the ARRL announced him as the winner of the August QST Cover Plaque award. Bob's article is "Rethinking Electrical Power for the Ham." The QST Cover Plaque award is given to the author or authors of the best article in each issue of QST Magazine and is determined by a vote of ARRL members. (ARRL)

+ Enjoy a simulated flyover of the most intriguing landmarks on giant asteroid Vesta, as seen by NASA's Dawn spacecraft: http://www.youtube.com/watch?feature=player_embedded&v=vz6J8cnc8

+ Congratulations to Hector, CO6CBF on his successful amateur radio and satellite demonstration in the town's central park at Aguada de Pasajeros, Cuba. Hector reports 21 stations were worked on 3

satellite passes. He was also able to demonstrate receiving the contact between the ISS and K3CUJ at the National Electronics Museum inLinthicum, MD. His gear includes a mobile 2m FM radio with a homebrew 70cm/2m down converter for receive, a 2M Kenwood TK-270 HT for transmit. He operates with the HT in one hand and his homebrew Arrow Antenna with a homebrew preamplifier in the other hand.

+ Earth-Mars-Earth Radio Message Received by Curiosity Controllers Utilizing the radio relay capability of the Mars Science Laboratory Curiosity Rover on the surface of Mars, an international network of telecommunications relay orbiters around Mars and NASA's Deep Space Network (DSN) voice playback of NASA Administrator Charles Bolden's message to JPL's Mars mission crew was played for the team on August, 27, 2012. The video and audio of the relayed message are available at: http://www.nasa.gov/mission_pages/msl/news/bolden20120827.html

+ AMSAT Commemorative Shirt for the 2012 Symposium is only available by mail order. If you have not received a copy of the order form you can download and print a copy from the the link on the front page at: http://www.amsat.org. The deadline for receiving your mail order is September 21, 2012.

+ The next Hudson Valley Satcom net dates are Thursday, September 13, and September 27, 8 PM EDT (UTC-4 UTC) on the 146.97 MHz MBARC Repeater (PL 100). An echolink connection is available on the N2EYH-L node. More information at: http://www.hvsatcom.org. (Stu, WA2BSS)

+ YouTube Space Lab Live Broadcast of Space Experiments: NASA has partnered with Space Adventures and YouTube on a global competition that challenged 14-18 year old students to design a science experiment to be performed in space. The winning experiments were conducted aboard the International Space Station, or ISS, and the results will be revealed live on YouTube. Of the 2,000 experiment ideas received from students in over 80 countries, only two were chosen to fly to space. The live broadcast can be seen on September 13, 2012, at 10:30 a.m. EDT (UTC-4), at: http://www.youtube.com/spacelab.

+ NASA's Digital Learning Network, or DLN, is hosting a special event on September 17, 2012, at 1 p.m. EDT to commemorate the departure of space shuttle Endeavour. Watch the live webstream from NASA's Kennedy Space Center in Florida as space shuttle Endeavour continues her journey on the back of the Shuttle Carrier Aircraft, a modified 747, to its final destination at the California Science Center in the heart of Los Angeles. For more information and to watch the webcast online, visit the DLN web site at: http://dln.nasa.gov

[ANS thanks everyone for the above information]

/EX

In addition to regular membership, AMSAT offers membership in the President's Club. Members of the President's Club, as sustaining donors to AMSAT Project Funds, will be eligible to receive additional benefits. Application forms are available from the AMSAT Office.

Primary and secondary school students are eligible for membership at one-half the standard yearly rate. Post-secondary school students enrolled in at least half time status shall be eligible for the student rate for a maximum of 6 post-secondary years in this status. Contact Martha at the AMSAT Office for additional student membership information. And with that, please keep in mind if you give a man a fish, he will eat today ... Promise a man a million fish, he will contribute heap big wampum to your tribal election campaign fund.

73,
This week's ANS Editor,
JoAnne Maenpaa, K9JKM

132. Weekly Highlights of Solar and Geomagnetic Activity, 03 - 09 September 2012

Newsgroup: rec.radio.amateur.space
Date: 2012-09-10 15:30:09 UTC
From: SWPC.Webmaster@noaa.gov
Message-ID: <20120910153001.94FB033C7E@panix2.panix.com>
Source record: 232
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.dx,rec.radio.amateur.space,rec.radio.shortwave,rec.radio.info

```
:Product: Weekly Highlights and Forecasts
:Issued: 2012 Sep 10 1418 UTC
# Prepared by the US Dept. of Commerce, NOAA, Space Weather Prediction Center
# Product description and SWPC contact on the Web
# http://www.swpc.noaa.gov/weekly.html
#
# Weekly Highlights and Forecasts
#
Highlights of Solar and Geomagnetic Activity
03 - 09 September 2012

Three M1 flares this week brought solar activity to moderate levels.
Region 1560 (N03, L=128, class/area=Eki/350 on 03 September) was the
largest and most magnetically complex (beta-gamma-delta) of the
week. It produced the first M-flare on September 6th at 0413Z before
rotating around the west limb the next day. Region 1564 (S14, L=68,
class/area=Esi/270 on 05 September) followed with a long-duration M1
event on September 8th at 1759Z and another on September 9th at
2236Z. None of the M1 flares were accompanied by significant radio
emissions, or coronal mass ejections (CMEs).

The week began with the end of an energetic particle event. The 10
MeV proton flux was above the 10 pfu threshold on September 3rd and
fell below on the 4th at 0625Z after reaching a maximum of 59 pfu
three days earlier. Later, a coronal mass ejection from beyond the
west limb was observed on September 8th, first visible in SOHO/LASCO
C2 coronagraph imagery at 1000Z. The event that produced the CME was
also believed to be responsible for a 10 MeV proton enhancement
which began around 1200Z. The peak 10 MeV flux during the
enhancement was 1 pfu.

The greater than 2 MeV electron flux at geosynchronous orbit was at
moderate levels on September 7th and 8th and at high levels on
September 9th. The remainder of the week was at background levels.

Geomagnetic activity was propelled to major storm levels this week
by the arrival of three CMEs. The first arrived at 03/1214Z when a
sudden impulse of 28 nT was observed at the Boulder magnetometer.
The disturbed geomagnetic field reached minor storm levels (Kp=5,
G1) by 03/1312Z, and major storm levels (Kp=6, G2) by 03/1500Z.
Conditions decreased to active levels for two periods before rising
again to minor storm levels at 04/0000Z. The geomagnetic field
returned to quiet to active levels until September 5th when two CMEs
observed on September 2nd arrived simultaneously. An interplanetary
```

shock was observed at the ACE spacecraft at 04/2203Z. The subsequent arrival at earth caused the magnetic field to jump to major storm levels by 05/0144Z. Kp indices then decreased one level each synoptic period until reaching Kp=2 by 05/15Z. On both September 3rd and 5th, the College, AK magnetometer recorded a period of severe storm (K=7,G3) levels. A solar sector boundary change brought active conditions for one period on the 6th, but the remainder of the week was mostly quiet.

Forecast of Solar and Geomagnetic Activity
10 September - 06 October 2012

Solar activity is expected to be low with a chance for moderate activity through the forecast period.

No proton events are expected at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit is expected to be at high levels on 10-11, 18-20 and 24-27 September.

Geomagnetic field activity is expected to be mostly quiet to unsettled. Active conditions are possible on 14-16 and 19-22 September, and again on 03-05 October associated with coronal hole high speed streams.

133. Crossposting Permitted to rec.radio.amateur.moderated

Newsgroup: rec.radio.amateur.space
Date: 2012-09-15 06:00:02 UTC
From: rram@panix.com
Message-ID: <radio/ham-radio/moderated/crossposting-1-1347688801@panix.com>
Source record: 233
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space,rec.radio.info

```
Posted-By: auto-faq 3.3.2 beta (PGPMoose V2.0, Perl 5.005)
Archive-name: radio/ham-radio/moderated/crossposting
Revision: 1.2 2011/11/02 04:08:53
Posting-Frequency: posted twice monthly
URL: http://www.panix.com/~rram/usenet/rram/index.html

Changes followed by "|".

After a 30-day public discussion and feedback period to gauge reader
opinions in March of 2009:

http://groups.google.com/group/rec.radio.amateur.moderated/browse_thread/thread/d7d337db35
f23326

the rec.radio.amateur.moderated Moderation Team had decided to consider |
amending its charter, and permit limited simultaneous crossposting to
rec.radio.amateur.moderated and one other unmoderated
amateur-radio-related discussion newsgroup. After a successful trial |
period (90 days, through early July 2009), we decided to adopt this |
change permanently. |

Approved rec.radio.amateur.* newsgroups are those that are currently
listed in the latest version of the "List of Big Eight Newsgroups" which
is crossposted monthly to news.announce.newgroups, news.groups, and
news.lists.misc.

Approved alt.radio.amateur.* and alt.ham-radio.* newsgroups are those
that have been created consistent with the suggestions in "So You Want
to Create an Alt Newsgroup" at:

http://www.faqs.org/faqs/alt-creation-guide/

Approved regional hierarchy newsgroups are those that contain either
"radio.amateur" or "ham-radio" in their names, including
uk.radio.amateur and aus.radio.amateur.misc.

We will make every reasonable effort to keep our list of approved
newsgroups up-to-date. In case we have overlooked any, and a submission
is rejected in error as a result, the rejected submitter can E-mail us
at our administrative contact address (in the signature at the bottom of
this article, and the default Reply-To for the rejection message)
requesting that it be added, and that the article be approved. We may
still choose to reject articles crossposted to any alt.* newsgroup with
an inappropriate name, including obscene language, embedded
name-calling, or encouragement of unlawful conduct.
```

Please direct any comments, questions, or criticisms to
rec-radio-amateur-moderated-request@panix.com.

134. ANS-260 AMSAT News Service Weekly Bulletins

Newsgroup: rec.radio.amateur.space
Date: 2012-09-16 12:42:12 UTC
From: JoAnne Maenpaa <k9jkm@comcast.net>
Message-ID: <000901cd9408$acd9b350$068d19f0$@net>
Source record: 234
Cross-posted to: rec.radio.amateur.space,rec.radio.info

AMSAT NEWS SERVICE
ANS-260

ANS is a free, weekly, news and information service of AMSAT North America, The Radio Amateur Satellite Corporation. ANS reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in designing, building, launching and communicating through analog and digital Amateur Radio satellites.

Please send any amateur satellite news or reports to:
ans-editor@amsat.org

In this edition:
* Cubesats Deployed From Vandenberg Atlas V Launch
* 2012 AMSAT Space Symposium & Annual General Meeting Comes to Orlando
* 2012 Symposium Banquet Speaker - Astronaut Dr. Samuel T. Durrance
* 2012 AMSAT Symposium Schedule
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* DynaCube CubeSat Under Development in South Africa
* Japan's PROITERES Launched - Signals Received
* AMSAT Store Grand Reopening
* Five CubeSats to be Deployed From ISS on September 27
* Satellite Shorts From All Over
* ARISS Status - 10 September 2012

SB SAT @ AMSAT $ANS-260.01
ANS-260 AMSAT News Service Weekly Bulletins

AMSAT News Service Bulletin 260.01
From AMSAT HQ SILVER SPRING, MD.
September 16, 2012
To All RADIO AMATEURS
BID: $ANS-260.01

Cubesats Deployed From Vandenberg Atlas V Launch

The Atlas V NROL-36 launch from Vandenberg Air Force Base in California, originally planned for August, successfully launched on 13 September at 2139 UTC.

This launch carried a satellite for the National Reconnaissance Office. Also aboard this flight at four cubesats as part of ELaNa IV mission and seven cubesats for government missions.

Several hours after launch Justin Foley, KI6EPH, announced via the #Cubesat IRC Channel that all eight P-PODS had successfully deployed.

The ELaNa Cubesats aboard are:
+ CINEMA (Cubesat for Ion, Neutral, Electron, Magnetic fields)
o Downlinks for engineering telemetry and command are in the
2400-2450 MHz range; Science telemetry is in 2200-2300 MHz
range.

+ CSSWE (Colorado Student Space Weather Experiment)
o Downlink 437.345 MHz, 9k6 with AX25

+ CP5 (PolySat)
o Downlink 437.405 MHz at 1 watt, AFSK on LSB AX.25 over NRZI at
1200 baud, every 2 minutes, begins 3.5 hours after first turn-on.

+ CXBN (Cosmic X-Ray Background Nanosatellite)
o Downlink 437.525 MHz, GFSK, AX.25

The US Government Satellites aboard are:
+ Aeneas
o First cubesat to deploy 2.4 GHz Dish Antenna. WIFI transmitter
will transmit on 2425.0 MHz with 1 watt of output power.
o Downlink 437.600 MHz AX25 1200 bps beacon every 10 seconds and
spread spectrum two-way link elsewhere in the 70cm band.
+ ORSES (ORS Enabler Satellite)
+ Horus
+ Re
+ Aerocube 4A, 4B, 4C
o Testing deployable solar panels.
o Technology demonstration of "parachute-like" devices to deorbit
satellites.
o Testing closed-loop attitude control system based around a
three-axis gyroscope.

Please refer to the prior bulletin for mission summaries and satel-
lite team web pages: http://amsat.org/pipermail/ans/2012/000637.html

A detailed article of the launch can be found on-line at:
http://www.americaspace.org/?p=23568

[ANS thanks NASA, the CubeSat Teams noted above, AMSAT-UK, Gunter's
Space Page and nasaspaceflightnow.com for the above information]

2012 AMSAT Space Symposium & Annual General Meeting Comes to Orlando

AMSAT announces the 2012 AMSAT Space Symposium will be held on
Friday, October 26th through Sunday, October 28th. The Symposium
weekend will feature:

+ Space Symposium with Amateur Satellite Presentations
+ Operating Techniques, News, & Plans from the Amateur Satellite World
+ Board of Directors Meeting open to AMSAT members
+ Meet Board Members and Officers
+ Annual General Membership Meeting
+ Annual Banquet-Keynote Speaker and Door Prizes

See the AMSAT Web Store to complete your on-line registration:
http://store.amsat.org/catalog/index.php?cPath=27

Downloadable paper registration forms in MS-Word format and
PDF format are available on the 2012 Symposium page:
http://www.amsat.org/amsat-new/symposium/2012/index.php

Prices for the Symposium are:
+ Symposium Registration including Proceedings
o Through September 23, 2012: $ 45.00
o Starting September 24, 2012: $ 50.00
o At the Door: $ 55.00

+ Saturday Evening Banquet $ 45.00

+ Sunday Morning Area Coordinators' Breakfast $ 15.00

+ Monday (Oct 29) bus trip to KSC and entrance ticket $ 100.00

The Symposium Hotel is the Holiday Inn at Orlando-International
Airport is located one mile from the Orlando International Airport
(MCO). The AMSAT discount rate is $99 + taxes per night. The reser-
vation block code used when calling the hotel directly is AMT.

The hotel telephone number is 407-851-6400. The Symposium Committee
recommends you make reservations by calling the hotel directly rather
than through the Web. Cutoff date for reservations is Oct 6, 2012.
The direct link to the hotel web page is:
http://www.holidayinn.com/hotels/us/en/orlando/mcoap/hoteldetail

The hotel offers free Internet connection and free airport shuttle.
When you arrive at the Orlando Airport call 407-709-5310 to request
the shuttle.

The Orlando International Airport (MCO) is the closest to the Sympos-
ium and is served by most major air carriers. The hotel address is:
5750 T.G. Lee Blvd - Orlando, FL 32822. A map link is included on
the hotel web page.

[ANS thanks the 2012 Symposium Committee for the above information]

2012 Symposium Banquet Speaker - Astronaut Dr. Samuel T. Durrance

The featured speaker for the AMSAT 2012 Saturday Evening Banquet on
October 27 will be Dr. Samuel T. Durrance, NASA Astronaut/Payload
Specialist and Professor of Physics and Space Sciences at the Flor-
ida Institute of Technology.

Biography

Samuel T. Durrance was born in Tallahassee, Florida, but considers
Tampa, Florida his hometown.

He received a Bachelor of Science degree and a Master of Science degree in physics (with honors), at California State University, Los Angeles, 1972 and 1974, respectively, and a doctorate in astro-geophysics at the University of Colorado at Boulder in 1980.

Dr. Durrance has been involved in space exploration, scientific research and education for over 30 years. He has logged over 615 hours in space as a payload specialist and member of the crew of Space Shuttle Columbia for the STS-35/Astro-1 and Space Shuttle Endeavour for the STS-67/Astro-2 missions.

He played several key roles in the design, construction, integration, and operation of the Hopkins Ultraviolet Telescope and NASA's Astro Observatory. He conducted research and directed graduate students at the Johns Hopkins University for 16 years.

He has designed and built spectrometers, detectors, and imaging systems, and made numerous spacecraft and ground-based astronomical observations. He conceived and directed a program to develop adaptive-optics instrumentation for ground based astronomy.

He led the team that designed and built the Adaptive Optics Coronagraph, which led to the discovery of the first cool brown dwarf, Gliese 229 b, orbiting a nearby star. He also co-discovered a telltale signature of planet formation in the dust disk surrounding the star beta Pictoris.

Starting in 2001, Durrance was the executive director of the Florida Space Research Institute (FSRI) created by the State of Florida in 2000. FSRI was located at NASA's Kennedy Space Center in support of the State's Space Life Sciences Laboratory. Durrance guided FSRI from its start up phase to a successful research and education organization.

Since 2006, he has been a professor of physics and space sciences at the Florida Institute of Technology. At Florida Tech he is developing an interdisciplinary research program and undergraduate degree program in astrobiology. His long-term goal at Florida Tech is to create a climate where students and faculty can regularly participate in space-based research programs. His research interests include the origin and evolution of the solar system, the search for planets around other stars, planetary astronomy, atmospheric physics, nuclear physics, adaptive optics, spacecraft operations, and the origin of life.

He has published over 70 technical papers on planetary astronomy, adaptive optics, atmospheric physics, nuclear physics, and spacecraft operations.

[ANS thanks the 2012 Symposium Committee for the above information]

2012 AMSAT Symposium Schedule

To help you plan your trip to Orlando the 2012 Symposium Committee
has posted a high-level schedule of the weekend's events.

Preliminary 2012 Symposium Schedule

Thursday 25 October 2012

AMSAT Board of Directors Meeting 8am - 9pm

Friday 26 October 2012

AMSAT Board of Directors Meeting 8am - Noon
Trips to SkyCraft 9am - Noon
AMSAT Symposium 1pm - 5pm

Saturday 27 October 2012

Symposium 8am - 3pm
AMSAT General Meeting 3:30pm
AMSAT Banquet 6:30pm - 10pm

Sunday 28 October 2012

7:30am AMSAT Area Coordinator's Breakfast
Local trip of Interest TBD

Monday 29 October 2012

Special trip to Kennedy Space Center 8am-6pm
The trip will include a round trip bus from the hotel and entrance
to the Space Center. The cost will be about $100. This is a wonderful
experience for those that haven't been and for those that have been
multiple times. We need to get an idea of how many will participate
to select the correct bus. Contact Martha if interested

Watch the AMSAT Symposium Web Pages for the latest information:
http://www.amsat.org/amsat-new/symposium/2012/index.php

[ANS thanks the 2012 Symposium Committee for the above information]

AMSAT-NA Board of Directions Election Results

As a result of the 2012 board of directors election, Tom Clark, K3IO,
Lou McFadin, W5DID, and Gould Smith, WA4SXM, will serve on the board
for two years. The first alternate is Mark Hammond, N8MH and the sec-
ond alternate is Patrick Stoddard, WD9EWK. The final results of the
voting with 700 ballots cast are as follows;

Tom Clark, K3IO 514
Lou McFadin, W5DID 449
Gould Smith, WA4SXM 393
Mark Hammond, N9MH 309
Patrick Stoddard, WD9EWK . 213

Steve Coy, K8UD 162

[ANS thanks Alan, WA4SCA, and Martha for the above information]

DynaCube CubeSat Under Development in South Africa

A news item on the South African Radio League reports on their September 9 amateur radio newscast that 20 interns at the Denel Dynamics Engineering Academy of Learning are designing and building the DynaCube CubeSat as part of their internship training. The interns are students who have completed their engineering degree, masters or PhD.

During the first year they spend half their time in the Academy and the other half in their designated departments. "The programme is aimed at exposing interns to a complete product development cycle", said Grant Wilson who leads the Academy. "Designing and building a CubeSat and developing a ground station to manage the satellite is an ideal project to achieve this."

The 20 strong Intern Project Team was split into three separate teams, each responsible for certain aspects of the project. Team Ground Zero is responsible for the ground station and radio frequency (RF) link components. Team Virtuoso is responsible for the cube structure and on-board computer; and Team Frodo is responsible for the payload, Attitude Control and Determination System (ADCS), and the launch.

More information about DynaCube on the SA AMSAT web at:
http://www.amasatsa.org.za

[ANS thanks SARL and SA AMSAT for the above information]

Japan's PROITERES Launched - Signals Received

The PROITERES satellite, built by a team of students and faculty members of Osaka Institute of Technology (OIT) was successfully launched aboard India's PSLV C21 rocket on September 9.

The purpose of the mission is to demonstrate powered flight using a Pulsed Plasma Thruster (PPT) engine. Its amateur radio callsign is JL3YZK.

PROITERES stands for PRoject of OIT Electric-Rocket-Engine Onboard Small Space Ship and will transmit on 437.485 MHz FM/AFSK. The spacecraft carries a camera and the two CPU's run the Linux operating system. Amateur radio operators around the world reported copying the downlink signal shortly after launch.

[ANS thanks Mineo Wakita, JE9PEL for the above information]

AMSAT Store Grand Reopening

The AMSAT Store is fully open for business after being updated. All the usual AMSAT software, hardware, and clothing are available, as is the registration for the AMSAT 2012 Symposium and activities: http://store.amsat.org/catalog/index.php?cPath=27

Please stop by, even if you are just looking: http://store.amsat.org/catalog/

You can also find a link to the AMSAT Store from the main web page at: http://www.amsat.org. It is the bottom button on the list on the left side of the main page.

If you don't find what you are looking for here, contact Martha at the main office:

+ E-mail at martha at amsat.org
+ From the US call toll free at (888) 322-6728
+ From all other locations call (301) 589-6062
+ Fax (301) 608-3410
+ Regular mail: AMSAT, 850 Sligo Ave. Suite 600, Silver Spring, MD 20910

[ANS thanks Alan Biddle, WA4SCA for tha above information]

Five CubeSats to be Deployed From ISS on September 27

Five cubesats launched on July 21 and now aboard the ISS have been integrated with the J-SSOD small satellite deployer on the the Japanese Experiment Module, also known as Kibo. They will be deployed with the Kibo robotic arm planned September 27, 2012. Deployment of these satellites was delayed last week due to crew EVA activities.

The five CubeSats on this mission include:

+ Raiko
http://www.astro.mech.tohoku.ac.jp/RAIKO/ (Japanese)
2U cubesat, photography, Ku-band beacon

+ We Wish
http://www.meisei.co.jp/news/2011/0617_622.html
Infrared camera for environmental studies

+ FITSat 1
http://www.fit.ac.jp/~tanaka/fitsat.shtml
High-speed data test, high power LED visual tracking
CW Beacon 437.250 MHz,
FM Data 437.445 MHz,
High speed data 5840.00 MHz.

+ F-1 Vietnam Student CubeSat
On-board camera for earth observation mission
VX-3R1, 437.485 MHz FM downlink:

o Solar cell power only, operates in sunlight only
o Output power: max 0.3W, half-wave dipole antenna
o Morse code beacon (10 chars) using PWM CW every 30 seconds

VX-3R2, 145.980 MHz FM downlink:
o Rechargeable battery, operates in dark and sunlight
o Output power: max 1.0W, half-wave dipole antenna
o AFSK 1200bps, half duplex, one AX.25 packet every 30 seconds

+ TechEdSat
http://ncasst.org/techedsat.html
http://www.uk.amsat.org/5018
Downlink on 437.465 MHz

[ANS thanks the CubeSat teams, and Mineo Wakita JE9PEL for the above information]

Satellite Shorts From All Over

+ California amateurs may be interested in observing the flyover on the morning of September 20, 2012, of space shuttle Endeavour. It is scheduled to perform a low-level flyover of northern California, passing near NASA's Ames Research Center and various landmarks in multiple cities, including San Francisco and Sacramento en route to its permanent home at the California Science Center in Los Angeles. Endeavour is mounted atop NASA's modified 747 Shuttle Carrier Aircraft (SCA). Additional details are posted at:
http://spaceref.com/news/viewpr.html?pid=38476

+ Keith Cowing from SpaceRef.com interviewed Flight Engineer Astronaut Suni Williams on the International Space Station:
http://www.youtube.com/watch?feature=player_embedded&v=T_D_o9UxpTE

+ Science minded hams might want to investigate CosmoQuest, home to several citizen science projects. You will find the opportunity to join Vesta Mappers - Explore the surface of Vesta, one of the largest asteroids in our Solar System. Or join Moon Mappers - to identify craters and other interesting phenomena in actual images of the moon. The Ice Investigators project will have you looking for asteroids and transient space objects to help to direct the New Horizons spacecraft. Visit http://cosmoquest.org/ for more information.

+ This article discusses how CubeSats have captured the attention of space agencies and universities world-wide due to the significant amount of science that can now be packed aboard. Read up at:
http://thespacereview.com/article/2155/1

+ The next Hudson Valley Satcom net date is Thursday, September 27, 8 PM EDT (UTC-4 UTC) on the 146.97 MHz MBARC Repeater (PL 100). An echolink connection is available on the N2EYH-L node. More information at: http://www.hvsatcom.org. (Stu, WA2BSS)

[ANS thanks everyone for the above information]

ARISS Status - 10 September 2012

1. German Students Delighted with ARISS Contact

An Amateur Radio on the International Space Station (ARISS) contact was held between on-orbit astronaut Sunita Williams, KD5PLB and students at the Gymnasium Michelstadt in Michelstadt, Germany on Friday, September 7. Williams was able to answer 14 questions posed by the students during the ISS pass. Over 1600 students, teachers, and VIP's were in attendance, as well as representatives from radio, television and newspapers. Positive feedback was received from the school, including the following: "Older colleagues compared the feeling to watching the moon landing in TV. Our Kids were electrified and already now we can see an increased interest in sciences and extracurricular activities. We are planning to continue this topic and have further projects in this field." Video has been posted.
See: http://www.youtube.com/watch?v=4xmL6wSPWzE

2. Girls' School Speaks with ISS Astronaut

On Sunday, September 9, Tara Anglican School in North Parramatta, New South Wales, Australia spoke with Astronaut Sunita Williams, KD5PLB via an Amateur Radio on the International Space Station (ARISS) contact. The radio connection was provided by telebridge station ON4ISS in Belgium. The contact was integrated into the school's science and space curriculum. Tara Anglican, a girls K-12 school, was selected by Oxford University as the Australian school to participate in the Global Jet Watch Program which links astronomers at Oxford University with students from four high schools around the world in Australia, Chile, South Africa and India in order to carry out cutting edge research. Oxford University installed a research grade 20 inch RC Optical telescope, together with custom designed instrumentation and an observatory with a 4.5 metre dome on Tara's grounds for use by the students. The school also formed a partnership with the Astronomical Society of New South Wales (ASNSW) through which students are mentored in complex astronomy projects by experienced amateur astronomers.

[ANS thanks Carol, KB3LKI, for the above information]

/EX

In addition to regular membership, AMSAT offers membership in the President's Club. Members of the President's Club, as sustaining donors to AMSAT Project Funds, will be eligible to receive additional benefits. Application forms are available from the AMSAT Office.

Primary and secondary school students are eligible for membership at one-half the standard yearly rate. Post-secondary school students

enrolled in at least half time status shall be eligible for the student rate for a maximum of 6 post-secondary years in this status. Contact Martha at the AMSAT Office for additional student membership information.

73,
This week's ANS Editor,
Lee McLamb, KU4OS

135. Weekly Highlights of Solar and Geomagnetic Activity, 10 - 16 September 2012

Newsgroup: rec.radio.amateur.space
Date: 2012-09-17 15:30:08 UTC
From: SWPC.Webmaster@noaa.gov
Message-ID: <20120917153001.887E633C93@panix2.panix.com>
Source record: 235
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.dx,rec.radio.amateur.space,rec.radio.shortwave,rec.radio.info

```
:Product: Weekly Highlights and Forecasts
:Issued: 2012 Sep 17 1309 UTC
# Prepared by the US Dept. of Commerce, NOAA, Space Weather Prediction Center
# Product description and SWPC contact on the Web
# http://www.swpc.noaa.gov/weekly.html
#
# Weekly Highlights and Forecasts
#
Highlights of Solar and Geomagnetic Activity
10 - 16 September 2012

Solar activity was at low levels during the first half of the of the
summary period, and ended the week at very low levels. Region 1569
(S12, L=296, class/area=Eac/210 on 14 September) was the largest and
most magnetically complex region of the period, yet only yielded
four C-class flares. The largest of these was a C3/Sf flare that
occurred at 11/0111Z. A filament eruption occurred near N22W20 at
approximately 13/0640Z. The associated CME had an estimated speed of
536 km/s, but had little to no impact on Earth. A Type II Radio
Sweep occurred at approximately 15/2259Z, had an estimated speed of
681 km/s, and was associated with a non-Earth directed CME near the
north west limb.

No proton events were observed at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit was at
high levels on 10 and 12 September. Moderate levels were observed on
11 September and again from 13 - 16 September.

The geomagnetic field was at quiet levels throughout the period with
two isolated unsettled periods on 12 September and 15 September due
to extended periods of negative Bz. A solar sector boundary crossing
was also observed at approximately 16/1800Z.

Forecast of Solar and Geomagnetic Activity
17 September - 13 October 2012

Solar activity is expected to be at very low to low levels with a
chance for moderate activity throughout the forecast period.

No proton events are expected at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit is
expected to be at high levels on 18-20 and 24-27 September, then
again from 07-09 October.
```

Geomagnetic field activity is expected to be quiet to unsettled with
active conditions possible on 19-22 September, 03-05, 09-10, and
12-13 October. The active conditions are mainly associated with
coronal hole high speed streams.

136. test

Newsgroup: rec.radio.amateur.space
Date: 2012-09-21 05:32:06 UTC
From: Yanko Yankov <samy_b1@shell4you.net>
Message-ID: <o0T6s.1$T44.0@fed03.iad>
Source record: 236

This is a test

Please, ignore

NX9G

137. ANS-267 AMSAT News Service Weekly Bulletins

Newsgroup: rec.radio.amateur.space
Date: 2012-09-23 04:17:48 UTC
From: JoAnne Maenpaa <k9jkm@comcast.net>
Message-ID: <001c01cd992e$26118480$72348d80$@net>
Source record: 237
Cross-posted to: rec.radio.amateur.space,rec.radio.info

AMSAT NEWS SERVICE
ANS-267

ANS is a free, weekly, news and information service of AMSAT North America, The Radio Amateur Satellite Corporation. ANS reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in designing, building, launching and communicating through analog and digital Amateur Radio satellites.

Please send any amateur satellite news or reports to:
ans-editor at amsat.org

In this edition:

* September 23 Last Day for Reduced Symposium Registration Rate
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* CubeSat Deployment From ISS Set for September 27
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* BUAA-SAT 435/145 MHz FM Amateur Radio Satellite Planned for 2014
* ARISS Rolls on With Successful School Contacts
* NASA Offers Opportunity to Use Communications Testbed on ISS
* Satellite Shorts From All Over

SB SAT @ AMSAT $ANS-267.01
ANS-267 AMSAT News Service Weekly Bulletins

AMSAT News Service Bulletin 267.01
>From AMSAT HQ SILVER SPRING, MD.
September 23, 2012
To All RADIO AMATEURS
BID: $ANS-267.01

September 23 Last Day for Reduced Symposium Registration Rate

AMSAT announces the 2012 AMSAT Space Symposium will be held on Friday, October 26th through Sunday, October 28th.

See the AMSAT Web Store to complete your on-line registration:
http://store.amsat.org/catalog/index.php?cPath'

Symposium Registration including Proceedings
o Through September 23, 2012: $ 45.00

o Starting September 24, 2012: $ 50.00
o At the Door: $ 55.00

Downloadable paper registration forms in MS-Word format and
PDF format are available on the 2012 Symposium page:
http://www.amsat.org/amsat-new/symposium/2012/index.php

The Symposium Hotel is the Holiday Inn at Orlando-International
Airport is located one mile from the Orlando International Airport
(MCO). The AMSAT discount rate is $99 + taxes per night. The reser-
vation block code used when calling the hotel directly is AMT.

The hotel telephone number is 407-851-6400. The Symposium Committee
recommends you make reservations by calling the hotel directly rather
than through the Web. Cutoff date for reservations is Oct 6, 2012.
The direct link to the hotel web page is:
http://www.holidayinn.com/hotels/us/en/orlando/mcoap/hoteldetail

The Symposium Schedule web page has been updated with links to find
more information about the planned activities. See:
http://www.amsat.org/amsat-new/symposium/2012/SymposiumSchedule.php

[ANS thanks the 2012 Symposium Committee for the above information]

2012 Barry Goldwater Amateur Radio Award to Bill Tynan, W3XO

The Radio Club of America announced this week that William A.
Tynan, W3XO, is the recipient of its 2012 Barry Goldwater Ama-
teur Radio Award. The award recognizes Bill's lifelong service
to the public through amateur radio. It will be presented at
the club's annual awards banquet in New York on November 16th.
ARRL CEO David Sumner, K1ZZ, like Bill a club Fellow, will be
the keynote speaker.

Bill, one of AMSAT's charter members, is a past President and
Chairman of the Board. For many years, he conducted QST's mon-
thly column, "The World Above 50 MHz." He is also a past Presi-
dent of the Central States VHF Society. Bill played a key role
in the origination of amateur radio from the Space Shuttle and
the International Space Station.

The Radio Club of America, founded in 1909, is the world's old-
est radio communications association. For more information, see:
http://www.radioclubofamerica.org.

Congratulations, Bill!

[ANS thanks Ray Soifer, W2RS for the above information]

AMSAT Awards

AMSAT Director Contests and Awards, Bruce Paige, KK5DO says congratulations are in order for our latest AMSAT Awards recipients.

The following have entered into the Satellite Communicators Club for making their first satellite QSO.
+ Steven Holland, KC9TTQ
+ Ron Reiter, KD8SEV
+ Dan Kowell, AL7RS
+ Michael Mustachia, KF5PHA
+ Randy Morden, VE6RGU
+ Glyn Dodwell, GM4CFS

The following have earned the AMSAT Communications Achievement Award.
+ Kenneth Holland, KC9TTR, #550

The following have earned the South Africa Satellite Communications Achievement Award.
+ Kenneth Holland, KC9TTR, #US179

The following have earned their Robert W. Barbee, Jr. W4AMI Award
+ Theo Doty, AA5CK, #79

To see all the awards visit http://www.amsat.org.

[ANS thanks Bruce Paige, KK5DO for the above information]

Silent Key: John Beanland, G3BVU

AMSAT has received the sad news on the passing of John Beanland, G3BVU. John was an avid AMSAT member and helped man the AMSAT booth at the Boxboro Hamfest over the years. His friends remember John to be outgoing and enthusiastic about amateur radio in space. AMSAT President Barry Baines, WD4ASW noted, "AMSAT has lost a good friend and enthusiastic member."

Charles "John" Beanland, born in Witney, England was 85 years old passed away on September 21, 2012 after a long illness. John enlisted in the UK Navy during WWII. He was first licensed as G3BVU in 1947. He worked for Post Office in Engineering and English Electrical Valve where he worked on Guided Weapons. He later joined Texas Instruments and finally Microwave Associates, UK where he developed VHF solid state power amplifiers all while attending and receiving BS degrees in Electrical Engineering, Radio and Telecommunications.

Microwave Associates transferred him from the UK to Burlington, MA in 1963. In 1966 he joined the MITRE Corporation in Bedford, MA as a Member of the Technical Staff working on microwave systems and Over The Horizon Radar (OTHR) HF direction finding systems until his retirement in 1993. During that time he received his Masters Degree in Electrical Engineering from Northeastern University. In 1972 he acquired Spectrum International, specializing in antennas, filters, VHF transverters and satellite tracking systems which he operated until his passing. He later received his US call sign, AA1YE and

taught Amateur Radio licensing courses and HF radio propagation
at local radio clubs.

John was married to Dorothy Beanland for over 57 years. They have
3 children and 3 grandchildren. He resided in West Acton, MA. A
wake will be held on Monday, September 24th from 5-8 PM at the
Acton Funeral Home on Rt. 111 in Acton, MA. A burial service will
be held at the Church of the Good Shepherd in Acton, MA at 10 AM,
Tuesday, September 25th followed by burial in Acton, MA.

[ANS thanks Joe Reisert, W1JR and Barry Baines, WD4ASW for the
above information]

Official Statement of the AMSAT-DL BoD About P3E & P5

Dear All,

The following News will appear as an Editorial in our up-coming
AMSAT-DL Journal.

Because of the importance of the contents the AMSAT-DL BOD and Pro-
ject Leaders decided to give this information to all team members
who are currently or who were directly or indirectly involved in
the past ... We want to make sure that our members get it from us
and not from any rumours on the net ... Thanks.

While the decision of DLR is hitting us hard, this is not yet the
end. I recently had some interesting meetings in China and if we
can't do Rocket Science in DL, we have to look for other countries.

But please read below ... We hope you will support us also in future
and if you want to re-join, you are also much welcome. AMSAT needs
YOU!! If we missed someone from the members, please forward this
e-mail.

Best wishes
Peter DB2OS
Hartmut DL1YDD
Michael DD5ER

DLR rejects P5-/Mascot-2 project

Dear Members and Friends of AMSAT-DL, discussions with the German
Ministry of Economics and the German space agency DLR spanned more
than 5 years. Amongst others, we met with State Secretary for Space
and Aerospace Hinze, DLR chairman Prof. W�rner and the DLR Program
Board. In 2009 AMSAT-DL, in collaboration with the DLR Institute
for Space Systems in Bremen, conducted two complex Concurrent Engin-
eering studies.

They were jointly presented to the DLR program board in K�ln-Porz
in 2010.

The final documentation confirmed the feasibility of the P5 project, both to the Moon and to Mars.

In October and November 2011 another two P5 meetings with DLR chairman Prof. W�rner, Ministry MinDirig Engelhard, representatives of DLR IRS Bremen and AMSAT-DL BOD took place. Topics were feasibility and financing model.

It turned out that the ministry had a different perception of the (DLR-) payloads.

DLR was asked to reconsider their payloads. Both AMSAT-DL BOD and IRS Bremen left the meetings with positive feelings.

Then it turned out that, since completion of the 2009 joint study, the P5 scientific appeal is apparently no longer attractive. Therefore it was jointly searched for modifications to regain a payload appeal that was attested in 2009. AMSAT-DL proposed landing part of the payload on Mars moon Deimos or Phobos. Our calculations showed that this is feasible with reasonable effort. The landing would be a particularly unique feature of the P5 mission.

After repeated enquiries we received a letter from DLR at end of June where they stated that "the DLR Program Board comes to the conclusion, that pursuit of the P5 idea is infeasible and also financially infeasible."

We repeatedly approached the DLR Program Board since then. The assertion was that any P5 mission will not fly with DLR: the scientific attraction was, compared with the current Mars missions, insufficient.

The primary reason for this is that the P5 MARS orbit is limited due to the low-cost character of the mission. From this orbit no attractive science is possible. Obviously our P5 mission is now compared with regular missions which cost hundreds of millions of Euro.

This rejection has a wide impact on AMSAT-DL. Activities of all involved persons, including in the P3-E project, was shaped for years by the P5 mission.

It was assumed that P3-E was to be launched as part of the P5 mission. This path is obstructed now.

We maintain our contacts with the various launching agencies able to launch P3-E into an appropriate orbit. The tremendous launching costs kept us from more concrete talks so far. Just recently good contact with AMSAT China (CAMSAT) was established. China has suitable launchers to bring payloads into GTO. Moreover, China has discovered that amateur radio is a means of motivating young people to technical university studies.

Furthermore we are very actively exploiting a potential shared ride of an amateur radio payload on a new geostationary satellite. We have already submitted a formal project proposal. The satellite will

be visible from Europe.

No antenna tracking will be necessary. The big advantage of this project is that due to the operational requirements of the primary payload, our launching and commissioning is tied to the not too far future.

The 20m dish antenna at Bochum observatory was originally refurbished and upgraded for the P5 mission and is presently used for Deep Space Mission and amateur radio purposes. The automatic reception of the STEREO probes and data transfer to NASA will continue. In collaboration with NASA and AMSAT-DL the modulation scheme will be changed to use Turbo coding. Both hardware and software is currently being designed by AMSAT-DL and will be used by the partner STEREO receiving stations worldwide. Our funding application is already approved. The project funding runs until the end of 2015.

The AMSAT-DL Marburg Lab will be preserved at least in medium term to be able to do work on P3-E and, should the situation arise, on the transponder of the mentioned geostationary satellite.

We pursue a near-term meeting with all P5 project team members to identify ways for a project continuation. The necessary procedures should be coordinated then.

Although we regret the DLR refusal of the P5 project (particularly because some DLR payload will not fly in any foreseeable time frame), and although it places serious challenges to AMSAT-DL, this is not the cancellation of a HEO amateur radio satellite. We will aggressively follow up all potential possibilities. We hope to be able to report positively at the AMSAT-DL AGM in autumn.

Since the Marburg University's withdrawal from the ZEL, the surrounding conditions have changed significantly, again. However, we will do everything we can do to get an amateur satellite launched into HEO.

We do trust in our volunteers and members.

The AMSAT-DL BOD:
Peter Guelzow, DB2OS
Hartmut Paesler, DL1YDD
Michael R. Lengruesser, DD5ER

Editors Note: A video of the AMSAT-DL update given by Peter Guelzow, DB2OS at the 2012 AMSAT-UK Colloquium can be viewed at:
- Go to http://www.batc.tv/
- Click on "Film Archive"
- Select "AMSAT 2012" in the Category box and click on Select Category
- Select "04 - AMSAT-DL" in the Stream box and click on Select Stream
- Click the play button on the video player window

[ANS thanks Peter Guelzow, DB2OS; Hartmut Paesler, DL1YDD; Michael R. Lengruesser, DD5ER; and AMSAT-DL for the above information]

CubeSat Deployment From ISS Set for September 27

Five cubesats launched on July 21 and now aboard the ISS have been integrated with the J-SSOD small satellite deployer on the the Japanese Experiment Module, also known as Kibo. They will be deployed with the Kibo robotic arm planned September 27, 2012.

First, 15:10-15:20 UTC: WE-WISH, RAIKO by Astronaut Akihiko Hoshide
Second, 16:30-16:40 UTC: TechEdSat, NanoRack/F-1, FITSAT-1 by JAXA GS

Satellite	Downlink	Beacon	Mode
FITSAT-1	437.445, 5.84GHz	437.250	FM,CW
WE WISH	437.505	437.505	SSTV,CW
RAIKO	2.2GHz, 13GHz	13GHz	38.4 - 500kbps
TechEdSat	437.465	437.465	CW
F-1	145.980	437.485	1200bps AFSK,FM,CW

Also, refer to the previous ANS bulletin on this topic at:
http://amsat.org/pipermail/ans/2012/000650.html

[ANS thanks Mineo Wakita, JE9PEL for the above information]

Dedicated University CubeSat Downlinks on the Table for ITU WRC-18

IARU Secretary Rod Stafford, W6ROD, reports that the IARU Administrative Council will meet in the next 45 days to address the agenda items for the 2015 World Radiocommunication Conference (WRC-15).

Planning for the dedicated spectrum for university research cubesats will begin for WRC-15 but the actual allocation of frequencies may not occur until the 2018 World Radiocommunication Conference.

In an article posted on the ARRL web, Stafford noted, &#65533;A lot of radio amateurs are aware of the increasing use of amateur spectrum by small satellites, mainly by universities. It is becoming an increasingly difficult situation to accommodate the number of small, non-commercial satellites within the amateur bands. These education-based satellites do not really fit within the definition of the Amateur Radio Service, but have been accommodated there. These small satellites are categorized as nanosatellites (weighing between 1-10 kg) and picosatellites (weighing less than 1 kg). The ITU is trying to deal with this issue in an orderly manner and a &#65533;preliminary&#65533; WRC-18 agenda item is to consider whether these satellite operations can be accommodated in an already crowded radio spectrum. As these issues develop, the IARU will keep its Member-Societies, such as the ARRL, aware of developments.&#65533; with an eye to building the best strategy to deal with those agenda

items in a way that is most favorable to the Amateur Radio Service."

Read the full article, including many other IARU agenda items at:
http://www.arrl.org/news/looking-ahead-to-wrc-15

[ANS thanks the ARRL for the above information]

BUAA-SAT 435/145 MHz FM Amateur Radio Satellite Planned for 2014

BUAA-SAT is a university micro-satellite project developed by the students of Beihang University (Beijing University of Aeronautics and Astronautics). It carries an amateur radio 435/145 MHz FM voice transponder

The satellite has a mass of 30kg, dimensions of 30cm*30cm*50cm and aims to go into a 600-800 km Sun Synchronous Orbit (SSO) from Tai-yuan in late 2014.

The primary missions are:
+ To study the application of COTS components used in the onboard electronic system
+ To demonstrate the coilable mast deployment mechanism
+ To carry out imaging using three CMOS cameras

Moreover, it provides a 27dBm U/V FM voice transponder for the use of radio hams world-wide as well as a 20dBm CW beacon and a 27dBm AX.25 beacon also in the 145 MHz band.

BUAA-SAT website http://sat.buaa.edu.cn/
BUAA-SAT Group in Google English http://tinyurl.com/BUAA-SAT-Group

AMSAT-UK also posted an article and photos at:
http://www.uk.amsat.org/10387

[ANS thanks Southgate ARC and AMSAT-UK for the above information]

ARISS Rolls on With Successful School Contacts

News from the Amateur Radio on the International Space Station (ARISS) Status Report - September 17, 2012

Maroochydore, Queensland, Australia

Students attending Maroochydore State School in Maroochydore, Queens-land, Australia participated in an Amateur Radio on the International Space Station (ARISS) contact on Wednesday, September 12 via tele-bridge station VK4KHZ in Australia. Akihiko Hoshide, KE5DNI answered 14 questions of the students before the ISS went over the horizon.

Approximately 40 students and guests were in attendance and the con-tact received coverage by radio, television and newspapers. The con-

tact was integrated into a comprehensive space curriculum, with lessons focused on the Venus Transit, the Juno mission and the Curiosity mission.

Dorado, Puerto Rico

An ARISS contact was held between Joe Acaba, KE5DAR on the ISS and Marcelino Canino Canino Middle School in Dorado, Puerto Rico on Wednesday, September 12 via telebridge station K6DUE in Greenbelt, Maryland. The session was conducted in Spanish, with all 16 questions answered. The students are involved in a Microsatellite Hardware program through which they design, build, launch, track and retrieve their microsatellites with the assistance of many local amateur radio operators.

Sindelfingen, Germany

On Thursday, September 13, Sunita Williams, KD5PLB spoke with students at the Gymnasium Unterrieden in Sindelfingen, Germany through an ARISS contact and answered their space-related questions. One hundred people showed up for the event, including 4 media outlets. The audio was broadcasted via 2 amateur radio relays. The contact was integrated into several other amateur radio activities which included the students preparing for entry level amateur radio licenses and building a satellite receiving station. Video has been posted: http://www.youtube.com/watch?v=uOnhrsOvg

NASA Goddard Space Flight Center in Greenbelt, Maryland

A second ARISS contact that Akihiko Hoshide, KE5DNI took part in last week was with children at the NASA Goddard Space Flight Center in Greenbelt, Maryland on Thursday, September 13. The students had 21 questions answered during the ISS pass, and as the coordinating person at Goddard had previously asked another astronaut for answers to the questions, the remaining students still received "official" answers to their questions. Nearly 100 people were in attendance, with 4 media cameras recording the event. Prince George's County Community TV reported on the event. See: http://tinyurl.com/9q939u3

Oak Hill, Florida

On Thursday, September 13, an ARISS contact was held between children at the Burns Sci-Tech Charter School in Oak Hill, Florida and Sunita Williams KD5PLB on the ISS. Daytona Beach Amateur Radio Association supported the school in this endeavor. The contact was integrated into lessons on radio waves, electricity, communications, geography and languages.

Kolo, Poland

Zesp&#65533;l Szk&#65533;l Technicznych w Kole, Kolo, Poland participated in an Amateur Radio on the International Space Station (ARISS) contact on Wednesday, September 19. Besides learning about space, amateur radio and satellite tracking in the classroom, students are also attending lectures on astronautics, engineering and astronomy. They are involved with related hands-on activities and competitions, with the winners receiving the opportunity to question the ISS astronaut. In addition, the school is forming astronomy and amateur radio clubs for the youth. The event was broadcast live on: http://live.arisspolska.info/

San Diego, California

An Amateur Radio on the International Space Station (ARISS) contact was completed with Sunset Hills Elementary School in San Diego, California on Thursday, September 20 at 17:24 UTC. Students are learning about the radio and space through age-appropriate hands-on activities. NASA education Web site materials are being used and guest speakers from the local Amateur Radio club will give a presentation to the students.

LaFayette, Georgia

Lafayette Middle School, La Fayette, Georgia completed an Amateur Radio on the International Space Station (ARISS) contact on Friday, September 21. The school used the ARISS contact to promote the areas of Science, Technology, Engineering, and Mathematics within its entire system. It arranged for Skype interviews with guests for the ARISS event: Dr. Rob Suggs and Dr. Bill Cooke of Marshall Space Flight Center in Huntsville, Alabama; Cristi Whitworth, Educational Director for Pisgah Astronomical Research Institute; and Dr. June Scobee Rodgers, Founding Chair of the Challenger Center at the University of Tennessee at Chattanooga.

[ANS thanks Carol Jackson, KB3LKI for the above information]

NASA Offers Opportunity to Use Communications Testbed on ISS

The SCAN testbed is a communications, navigation and networking demonstration platform based on the STRS. The experimental platform began its initial checkout activities on the space station August 13 and will operate for as long as three years.

NASA is announcing opportunities for academia, industry and government agencies to develop and carry out research and technology demonstrations on the International Space Station using the newly installed Space Communications and Navigation (SCAN) testbed.

There are two announcements of opportunity. The SCAN Testbed Experiment Opportunity invites industry and other government agencies to

enter into Space Act Agreements with NASA to use the space station's SCAN platform.

The SCAN Testbed Cooperative Agreement Notice invites academia to develop proposals to use the orbiting laboratory's SCAN testbed research capabilities. NASA expects the first demonstrations by late 2013 or early 2014.

These opportunities will allow researchers to develop new software according to the Space Telecommunications Radio Standard (STRS) architecture for radios and reconfigure how radios communicate in space.

Experiments will provide waveforms and software components to the STRS waveform repository and enable future hardware platforms to use common reusable software modules. These new capabilities could enable greater scientific return from future NASA missions.

Details and specifications are available from NASA:
http://tinyurl.com/SCAN-Testbed (nasa.gov)
http://spaceflightsystems.grc.nasa.gov/SOPO/SCO/SCaNTestbed/Candidate/

[ANS thanks NASA and Space-Travel.com for the above information]

Satellite Shorts From All Over

+ AMSAT's Keeper of the Keps, Ray Hoad, WA5QGD reports that the ELaNa cubesats launched 9/17/2012 have been added to this week's KEPs: AENEAS - Cat #38760; CSSWE - Cat #38761; CP5 - Cat #38763

+ Photos and a video of the Atlas launch from Vandenberg can be viewed at: http://spaceflightnow.com/atlas/av033/ This launch carried satellites for the National Reconnaissance Office. Also aboard this flight at four cubesats as part of ELaNa IV mission and seven cubesats for government missions.

+ A photo of the Soyuz TMA-04M spacecraft as it lands with Expedition 32 Commander Gennady Padalka of Russia, NASA Flight Engineer Joe Acaba and Russian Flight Engineer Sergie Revin in a remote area near the town of Arkalyk, Kazakhstan, on September 17 can be seen at: http://spaceref.com/news/viewsr.html?pidB064

+ NASA Explorer Schools is offering students in grades 4-12 an opportunity to ask questions of Bob Cabana, astronaut and Director of NASA's Kennedy Space Center. Join the video chat on Sept. 25, 2012, from 1-1:45 p.m. EDT to ask Cabana questions about his education, astronaut training, living and working in space and the future of space exploration. Students do not need to be in a school participating in the NASA Explorer Schools project in order to ask questions during this video chat. Submit questions during the chat through a chat window, or send them to:
NASA-Explorer-Schools@mail.nasa.gov.
To learn more about NES, visit http://www/explorerschools.nasa.gov.

For more information and to view the video chat, visit:
http://tinyurl.com/explorer-chat (nasa.gov)

+ NASA has announced their "Space Place Prime," the new NASA magazine for iPad. This free, brand new app gathers some of the best and most recent Web offerings from NASA. It taps engrossing articles from The Space Place website, enlightening NASA videos and daily images such as the Astronomy Picture of the Day and the NASA Earth Observatory Image of the Day. For more information about the new magazine, visit http://spaceplace.nasa.gov/ios/. (iPad is a registered trademarks of Apple Inc.)

+ The Houston AMSAT Net meets every Wednesday at 0100z (this is Tuesday evening in North America) on Echolink - Conference *AMSAT* .
The MP3 audio is also streamed http://www.amsatnet.com. After the net a Podcast is available at:
http://www.amsatnet.com/podcast.xml or iTunes

+ The next Hudson Valley Satcom net date is Thursday, September 27, 8 PM EDT (UTC-4 UTC) on the 146.97 MHz MBARC Repeater (PL 100). An echolink connection is available on the N2EYH-L node. More information at: http://www.hvsatcom.org. (Stu, WA2BSS)

+ The Canadian Space Agency announced that a British Columbia artisan-made organic cereal is one of 12 Canadian foods to accompany Canadian Astronaut and Mission 35 Commander Chris Hadfield on the December space mission to the International Space Station where he will live and work for six months as part of the crew. We wonder how many students will ask how the crew is enjoying their cereal described at: http://spaceref.com/news/viewpr.html?pid8629

+ How would you like to be famous? If you know any scientific, math, or electronics puns send them to k9jkm@amsat.org. The winners will occasionally be included in the ANS bulletins.

[ANS thanks everyone for the above information]

/EX

In addition to regular membership, AMSAT offers membership in the President's Club. Members of the President's Club, as sustaining donors to AMSAT Project Funds, will be eligible to receive additional benefits. Application forms are available from the AMSAT Office.

Primary and secondary school students are eligible for membership at one-half the standard yearly rate. Post-secondary school students enrolled in at least half time status shall be eligible for the student rate for a maximum of 6 post-secondary years in this status. Contact Martha at the AMSAT Office for additional student membership information. And with that, please keep in mind that programming today

is a race between software engineers striving to build bigger and
better idiot-proof programs, and the Universe trying to produce bigger
and better idiots. So far, the Universe is winning.

73,
This week's ANS Editor,
JoAnne Maenpaa, K9JKM

138. Weekly Highlights of Solar and Geomagnetic Activity, 17 - 23 September 2012

Newsgroup: rec.radio.amateur.space
Date: 2012-09-24 15:30:07 UTC
From: SWPC.Webmaster@noaa.gov
Message-ID: <20120924153001.6FB9A33C53@panix2.panix.com>
Source record: 238
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.dx,rec.radio.amateur.space,rec.radio.shortwave,rec.radio.info

```
:Product: Weekly Highlights and Forecasts
:Issued: 2012 Sep 24 1239 UTC
# Prepared by the US Dept. of Commerce, NOAA, Space Weather Prediction Center
# Product description and SWPC contact on the Web
# http://www.swpc.noaa.gov/weekly.html
#
# Weekly Highlights and Forecasts
#
Highlights of Solar and Geomagnetic Activity
17 - 23 September 2012

Solar activity reached low levels this week. C-class x-ray flares
were observed on 17-20 and 23 September. The largest, a C2/Sf, was
recorded from Region 1576 (S21, L=180, class/area Dso/70 on 20
September) at 19/1512 UTC. The remainder included a C2 flare from
Region 1575 (N08, L=181, class/area Eko/320 on 22 September) at
17/1406 UTC, a C1 at 18/1009Z, and a C1 from Region 1574 (S22,
L=302, class/area Cao/40 on 20 September) at 20/1139 UTC, and a
long-duration C1 from beyond the east limb at 23/1556 UTC. The
long-duration C-flare was associated with a vivid CME in LASCO C2
imagery. Estimated plane-of-sky speed was around 600 km/s.

No proton events were observed at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit reached
moderate levels each day of the week except the 20th when it
remained at background levels.

The geomagnetic field ranged from quiet to active levels during the
week, with minor storm levels observed at high latitudes on all but
the first and last days. The week began with the geomagnetic field
at quiet to unsettled levels. Geomagnetic field activity increased
to active levels late on the 19th when a corotating interaction
region (CIR) became geoeffective. A coronal hole high speed stream
followed on the 20th bringing mostly quiet to unsettled conditions.
Between the 19th and the 20th, the solar sector changed from
positive to negative, consistent with the geoeffective coronal hole
polarity. Solar wind speed at the ACE spacecraft fluctuated between
600 and 400 km/s between the 20th and 21st, before beginning a slow
decline late on the 21st. Solar wind speed by the end of the week
had dropped to about 350 km/s. The Bz component of the
interplanetary magnetic field reached its maximum of approximately
-11 nT late on the 19th with the arrival of the CIR.
```

Forecast of Solar and Geomagnetic Activity
24 September - 20 October 2012

Solar activity is expected to be at low levels with an increasing chance for moderate activity during the first two weeks of the period as active regions rotate onto the visible disk.

A slight chance for a proton event exists due to potential activity associated with returning regions from 24 September through 08 October.

The greater than 2 MeV electron flux at geosynchronous orbit is expected to be at high levels on 8-9 October and again on 17-18 October.

Geomagnetic field activity is expected to remain mostly at quiet to unsettled levels except for 3-5 October, 09-10 October, and 16-17 October when recurrent coronal hole high speed streams are expected to bring a chance for active levels.

139. ANS-274 AMSAT News Service Weekly Bulletins

Newsgroup: rec.radio.amateur.space
Date: 2012-09-30 15:54:20 UTC
From: JoAnne Maenpaa <k9jkm@comcast.net>
Message-ID: <001d01cd9f23$d5f35c20$81da1460$@net>
Source record: 239
Cross-posted to: rec.radio.amateur.space,rec.radio.info

AMSAT NEWS SERVICE
ANS-274

ANS is a free, weekly, news and information service of AMSAT North America, The Radio Amateur Satellite Corporation. ANS reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in designing, building, launching and communicating through analog and digital Amateur Radio satellites.

Please send any amateur satellite news or reports to:
ans-editor@amsat.org

In this edition:
* Satellite Operation from the USS IOWA for Scouting JOTA
* AMSAT 2012 Space Symposium Papers Due October 1
* AMSAT 2012 Field Day Results
* Silent Key: Michael Owen, VK3KI
* UKube-1 Amateur Radio CubeSat Books a Ride on Soyuz-2
* ARISS Status - 24 September 2012

SB SAT @ AMSAT $ANS-274.01
ANS-274 AMSAT News Service Weekly Bulletins

AMSAT News Service Bulletin 274.01
From AMSAT HQ SILVER SPRING, MD.
September 30, 2012
To All RADIO AMATEURS
BID: $ANS-274.01

Satellite Operation from the USS IOWA for Scouting JOTA

Jim Jerzycke, KQ6EA says he will be operating for the BSA JOTA event from the USS IOWA in San Pedro, California on 20 October from 1600 UTC to 2300 UTC. The callsign will be NI6BB on FO-29, AO-27, and AO-7.

Jim will concentrate mostly on the linear birds but conditions permitting he will also try to make FM contacts. Pass predictions also show a couple of good ISS passes so operation will depend on its operating mode at that time.

The Jamboree-on-the-Air, or JOTA, is an annual Scouting event that uses amateur radio to link Scouts around the world, around the nation, and in your own community. For more information about JOTA see: http://www.scouting.org/jota.aspx

[ANS thanks Jim Jerzycke, KQ6EA for the above information]

AMSAT 2012 Space Symposium Papers Due October 1

Symposium Proceedings Editor, Dan Schultz, N8FGV reminds authors the final copy of your paper for the 2012 Space Symposium is due by October 1, 2012. Dan requests a tentative title of your presentation as soon as possible, with final copy to be by October 1 for inclusion in the printed proceedings. Abstracts and papers should be sent to Dan Schultz, N8FGV, at n8fgv at amsat.org

Proposals for papers, symposium presentations and poster presentations are invited on any topic of interest to the amateur satellite community:

+ Papers for publication in the Proceedings

+ Symposium Presentations

+ Poster Presentations

+ Equipment and Operating Demonstrations

The Symposium Committee still has prime slots available on the speaker's schedule. The AMSAT Symposium depends on YOU to make it happen, without speakers there is no Symposium.

Please consider doing a presentation, even if you have never done so in the past. We are especially interested in papers and presentations involving our educational partnerships with K-12 and university level classrooms. Education is quickly becoming critical for our future rides to space.

Additionally registration for the 2012 AMSAT Space Symposium, to be held on Friday, October 26th through Sunday, October 28th is now open on-line. A mail-in option is also available those preferring this approach.

See the AMSAT Web Store to complete your on-line registration:
http://store.amsat.org/catalog/index.php?cPath'

Downloadable paper registration forms in MS-Word format and
PDF format are available on the 2012 Symposium page:
http://www.amsat.org/amsat-new/symposium/2012/index.php

[ANS thanks 2012 Symposium Proceedings Editor Dan Schultz, N8FGV for the above information]

AMSAT 2012 Field Day Results

AMSAT Director Contests and Awards, Bruce Paige, KK5DO has released the results of the 2012 AMSAT Field Day. Bruce wrote, "Field day this year had some unexpected results. The full story with photos will be in an issue of the AMSAT Journal. This was one of the closest field

day ever for the top 4 spots."

2012 Field Day Standings - in the event of a tie, the calls are alphabetical.

Rank	Call	Class	Score
1	K6MMM	3A	58 First
2	W5MSQ	2A	53 Second
3	W6YX	3F	52 Third
4	K4BFT	4A	50 Fourth
5	K6AA	3A	29
6	K4JJ	4A	16
7	WC5C	4F	15
8	W5IU	4A	13
9	WI9MRC	4A	8
10	CO6CBF	1E	7
11	K8UNS	4A	7
12	WD9EWK	1B	6
13	K2IRT	3A	4
14	K5DX	1A	4
15	KK5W	5A	2
16	K9MOT	1A	2
17	VE3RAM	2A	1
18	VE9EMM	2A	1
19	W4EM	3A	1

[ANS thanks AMSAT Director Contests and Awards, Bruce Paige, KK5DO for the above information]

Silent Key: Michael Owen, VK3KI

AMSAT has received the sad news of the passing of IARU Region 3 Chairman Michael Owen, VK3KI, on September 22. He was also President of the Wireless Institute of Australia (WIA).

Owen's first notable contributions to amateur radio started at the 1979 World Administrative Radio Conference. WARC-79 is memorable primarily because it's where the Amateur Radio Service gained the bands at 10, 18 and 24 MHz. He also drafted the resolution to exempt the Amateur-Satellite Service from coordination procedures that otherwise would have bogged us down in endless paperwork and great expense. He was a member of the IARU team who handled the rewrite of Article 25, the rules that apply specifically to the Amateur and Amateur-Satellite Services.

Owen is survived by his wife Nan, and two daughters. Funeral services were held on September 28 at St Andrews Anglican Church in Brighton, Victoria, Australia.

[ANS thanks the Wireless Institute of Australia, the IARU, and the ARRL for the above information]

UKube-1 Amateur Radio CubeSat Books a Ride on Soyuz-2

AMSAT-UK published this news on their web:
http://www.uk.amsat.org/10497

UKube-1 - the UK Space Agency's first CubeSat mission - has 'booked' its journey into space on a Russian Soyuz-2 rocket. The launch from the Baikonur Cosmodrone in Kazakhstan is expected to take place in March 2013.

UKube-1 carries an amateur radio 435/145 MHz linear transponder built by members of AMSAT-UK.

The UK Space Agency have issued the following press release:

The UKube-1 nanosatellite is a collaboration between the UK Space Agency, industry and academia. It will allow the UK to fly educational packages, test new technologies and carry out new space research quickly and efficiently. It is envisaged as the pilot for a full national CubeSat programme.

Dr David Williams, Chief Executive of the UK Space Agency, said, "UKube-1 is almost ready to fly; the platform is nearly complete, 4 of the missions 5 payloads are mission-ready and we have now secured a launch with Roscosmos. We are eagerly awaiting the start of the innovative experiments that this small but mighty satellite will perform once in orbit around our planet."

The winning UKube-1 payloads from the UK Space Agency's payload competition include the first GPS device aimed at measuring plasmaspheric space weather; a camera that will take images of the Earth and test the effect of radiation on space hardware, using a new generation of imaging sensor; an experiment to demonstrate the feasibility of using cosmic radiation to improve the security of communications satellites and to flight test lower cost electronic systems; and a payload made up of 5 experiments that UK students and the public can interact with.

As well as providing a fantastic opportunity for innovative UK companies and UK academics to collaborate on a national space project, UKube-1 is also useful for training the next generation of space engineers and will include a tiny radio transmitter for science education, and a materials science experiment from which school students can receive data. The system, funded by volunteer members and friends of AMSAT-UK, is called FUNcube and will be integrated with UKube-1 as part of the programme.

[ANS thanks AMSAT-UK for the above information]

ARISS Status - 24 September 2012

1. Successful Contacts Held

Students from Zesp&#65533;l Szk&#65533;l Technicznych w Kole in Kolo, Poland participated in an Amateur Radio on the International Space Station (ARISS) contact with Akihiko Hoshide, KE5DNI, aboard the ISS on Wednesday, September 19. Hoshide answered all 18 questions posed by the students during the overhead pass, which included topics on astronaut training, education, and skills and abilities needed on the ISS.
Video of the event may be viewed here:
http://www.livestream.com/arisspolska/video?clipId&#65533;a_4a1f475f-d1a4-4e4c-baf5-a91a80d0c243&utm_source&#65533;library&utm_medium&#65533;-thumb (line wrap)

An Amateur Radio on the International Space Station (ARISS) contact was held between Sunset Hills Elementary School in San Diego, California and Akihiko Hoshide, KE5DNI on the ISS on Thursday, September 20. Students were able to have 13 questions answered about living on the ISS. Three television stations and other media covered the event.
Video may be viewed at:
http://www.ustream.tv/recorded/25558153

CBS has an article on its website:
http://www.cbs8.com/story/19605202/local-students-aim-high-and-connect-with-space-station (line wrap)

and the North County Times ran a story:
http://www.nctimes.com/news/local/poway/rancho-penasquitos-international-space-station-chat-gives-students-higher-education/article_d02abc57-5246-50d0-9f17-4cbc11532c9a.html

On Friday, September 21, Lafayette Middle School, La Fayette, Georgia took part in an Amateur Radio on the International Space Station (ARISS) contact with Sunita Williams, KD5PLB. The gymnasium was filled with students, guests and VIPs who listened as the school's Rambler Radio Club members spoke with the astronaut. The school hopes the ARISS contact will help get the students interested in the areas of Science, Technology, Engineering, and Mathematics. WRCB TV covered the event. See:
http://www.wrcbtv.com/story/19610751/iss-and-lafayette-middle-students-make-contact (line wrap)

2. ARISS International Team Meeting Held

The ARISS International Team monthly teleconference was held on Tuesday, September 18. Topics of discussion included a status on HamTV, as well as an update on the new VHF Ericsson which is expected to launch to the ISS later this year.
Minutes have been posted.
See: http://ariss.rac.ca/arisstel2012-09-18.htm

3. ARISS Status on Social Media

ARISS currently has 1480 followers on Twitter:
http://twitter.com/ARISS_status

And as a reminder, ARISS news may also be found on Facebook. See:
http://www.facebook.com/pages/Amateur-Radio-on-the-International-Space-Station-ARISS/153679794647788

4. ARRL Articles on ARISS

On September 20, the American Radio Relay League (ARRL) carried a story written by ARISS member Dave Jordan about "Teach-In Day," an annual event in Seminole County, Florida which provides opportunities for interested parties to visit schools and teach the children about their area of expertise. The Lake Monroe Amateur Radio Society visited English Estates School and talked about amateur radio, amateur satellites, the ISS and ARISS and the role of amateur radios during emergencies. English Estates participated in its own ARISS contact in May 2011. To view, "The 2011 English Estates Teach-In," see: http://www.arrl.org/the-2011-english-estates-teach-in

5. Stonepark Intermediate Announces Upcoming Contact

Stonepark Intermediate School in Charlottetown, PEI, Canada is preparing for an ARISS contact with Canadian astronaut Chris Hadfield, KC5RNJ/VA3OOG, who is scheduled to join the ISS Expedition 34 crew in December of this year. Sue Geddes, a teacher-librarian at Stonepark, was interviewed about the upcoming event:
http://www.cbc.ca/islandmorning/episodes/2012/09/20/stonepark-space---canadian-astronaut-chris-hadfield/ (line wrap)
The school has also posted information about the contact on its Web site. See:
http://stonepark.wordpress.com/ariss-international-space-station-communicati
on/

6. South Florida Science Museum Holds Essay Contest for ARISS Contact

The South Florida Science Museum held an essay contest for students in the Palm Beach County School District to select fifteen K-12 students to participate in an ARISS contact in October. Deadline for submissions was September 24. For more information, see:
http://www.sfsm.org/index.cfm?fuseaction&#65533;ws.details&ArticleIdd&returnTomain

[ANS thanks Carol, KB3LKI, for the above information]

/EX

In addition to regular membership, AMSAT offers membership in the President's Club. Members of the President's Club, as sustaining donors to AMSAT Project Funds, will be eligible to receive additional benefits. Application forms are available from the AMSAT Office.

Primary and secondary school students are eligible for membership at one-half the standard yearly rate. Post-secondary school students enrolled in at least half time status shall be eligible for the student rate for a maximum of 6 post-secondary years in this status. Contact Martha at the AMSAT Office for additional student membership information.

73,
This week's ANS Editor,
Lee McLamb, KU4OS

140. Crossposting Permitted to rec.radio.amateur.moderated

Newsgroup: rec.radio.amateur.space
Date: 2012-10-01 06:00:02 UTC
From: rram@panix.com
Message-ID: <radio/ham-radio/moderated/crossposting-1-1349071201@panix.com>
Source record: 240
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space,rec.radio.info

```
Posted-By: auto-faq 3.3.2 beta (PGPMoose V2.0, Perl 5.005)
Archive-name: radio/ham-radio/moderated/crossposting
Revision: 1.2 2011/11/02 04:08:53
Posting-Frequency: posted twice monthly
URL: http://www.panix.com/~rram/usenet/rram/index.html

Changes followed by "|".

After a 30-day public discussion and feedback period to gauge reader
opinions in March of 2009:

http://groups.google.com/group/rec.radio.amateur.moderated/browse_thread/thread/d7d337db35
f23326

the rec.radio.amateur.moderated Moderation Team had decided to consider |
amending its charter, and permit limited simultaneous crossposting to
rec.radio.amateur.moderated and one other unmoderated
amateur-radio-related discussion newsgroup. After a successful trial |
period (90 days, through early July 2009), we decided to adopt this |
change permanently. |

Approved rec.radio.amateur.* newsgroups are those that are currently
listed in the latest version of the "List of Big Eight Newsgroups" which
is crossposted monthly to news.announce.newgroups, news.groups, and
news.lists.misc.

Approved alt.radio.amateur.* and alt.ham-radio.* newsgroups are those
that have been created consistent with the suggestions in "So You Want
to Create an Alt Newsgroup" at:

http://www.faqs.org/faqs/alt-creation-guide/

Approved regional hierarchy newsgroups are those that contain either
"radio.amateur" or "ham-radio" in their names, including
uk.radio.amateur and aus.radio.amateur.misc.

We will make every reasonable effort to keep our list of approved
newsgroups up-to-date. In case we have overlooked any, and a submission
is rejected in error as a result, the rejected submitter can E-mail us
at our administrative contact address (in the signature at the bottom of
this article, and the default Reply-To for the rejection message)
requesting that it be added, and that the article be approved. We may
still choose to reject articles crossposted to any alt.* newsgroup with
an inappropriate name, including obscene language, embedded
name-calling, or encouragement of unlawful conduct.
```

Please direct any comments, questions, or criticisms to
rec-radio-amateur-moderated-request@panix.com.

141. Weekly Highlights of Solar and Geomagnetic Activity, 24 - 30 September 2012

Newsgroup: rec.radio.amateur.space
Date: 2012-10-01 15:30:07 UTC
From: SWPC.Webmaster@noaa.gov
Message-ID: <20121001153001.5F6EE33C91@panix2.panix.com>
Source record: 241
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.dx,rec.radio.amateur.space,rec.radio.shortwave,rec.radio.info

```
:Product: Weekly Highlights and Forecasts
:Issued: 2012 Oct 01 1415 UTC
# Prepared by the US Dept. of Commerce, NOAA, Space Weather Prediction Center
# Product description and SWPC contact on the Web
# http://www.swpc.noaa.gov/weekly.html
#
# Weekly Highlights and Forecasts
#
Highlights of Solar and Geomagnetic Activity
24 - 30 September 2012

After a relatively unspectacular start, solar activity reached
moderate levels this week. The first four days saw only occasional
C-class flares. Regions 1575 (N08, L=181, class/area=Eko/320 on 22
Sep) and 1577 (N08, L=162, class/area=Dai/100 on 23 Sep) were the
most prolific regions, producing 11 and 9 C-class events,
respectively. One of the events from Region 1577, a C3/1f flare at
27/2357 UTC, was associated with a filament eruption northwest of,
and adjacent to the region. The CME was subsequently visible in
LASCO C2 imagery at 28/0018 UTC and LASCO C3 imagery 12 minutes
later. Radial velocity of the ejecta was estimated to be 872 km/s.
By midday on the 28th, x-ray background began rising, signaling an
increase in activity as Region 1583 began to grow rapidly. By 30
September at 0433 UTC, Region 1583 (N12, L=187, class/area=Dso/90 on
30 Sep) had produced an M1 flare. Later that day, Region 1575
produced the second largest flare of the week, a C9/Sf at 30/2339
UTC.

A 10 MeV integrated proton flux greater than 10 pfu event occurred
in conjunction with the C3 flare mentioned above. Proton flux
crossed the 10 pfu threshold on 28/0300 UTC, peaked at 28 pfu at
28/0445 UTC, and ended at 28/1040 UTC.

The greater than 2 MeV electron flux at geosynchronous orbit reached
moderate levels each day of the week.

Geomagnetic field activity was quiet until the end of the week when
it reached active levels. The CME from 28 September described above
reached earth on the 30th. Two separate interplanetary shocks (IPS)
were observed at the ACE spacecraft. The first was at 30/1025 UTC,
followed by a 15nT geomagnetic sudden impulse (SI) observed at the
Boulder magnetometer at 30/1138 UTC. A second IPS was observed at
the ACE spacecraft at 30/2213 UTC followed by a 35nT SI at the
Boulder magnetometer at 30/2307 UTC. The first sudden impulse was
```

followed by unsettled conditions; the second, by active conditions. The Bz component of the interplanetary magnetic field reached -15 at 30/2225 UTC and continues to hover between -15 and -20 nT at the time of this report.

Forecast of Solar and Geomagnetic Activity
01 October - 27 October 2012

Solar activity is expected to be at low levels, with a chance for moderate activity, particularly for the first two days of the forecast period and again in mid-October.

No proton events are expected at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit is expected to be at background levels except for 7-9 October in association with a recurrent coronal hole.

Geomagnetic field activity is expected to begin the period ranging from minor to strong (G1-G3) levels due to the CME from 28 September. Conditions should quickly return to mostly quiet and for the period be generally quiet levels with the possible exceptions of 3-5 October and 15-17 October when coronal hole high speed streams are expected to be geoeffective.

142. WSR-275 AMSAT Weekly Satellite Report

Newsgroup: rec.radio.amateur.space
Date: 2012-10-03 13:43:38 UTC
From: JoAnne Maenpaa <k9jkm@comcast.net>
Message-ID: <000c01cda16c$5cc55ab0$16501010$@net>
Source record: 242
Cross-posted to: rec.radio.amateur.space,rec.radio.info

```
This report is organized into four (4) parts.
Part 1 (S1) - operational analog amateur satellites
Part 2 (S2) - operational digital amateur satellites
Part 3 (S3) - non - operational satellites
Part 4 (S4) - deborbited/returned satellites

SB SAT @ AMSAT W8ISS $WSR-275.S1
WSR 275 Part 1 10/01/2012

AMSAT NEWS SERVICE BULLETIN 275.S1
FROM AMSAT HQ SILVER SPRING, MD, October 01, 2012
TO ALL RADIO AMATEURS
BID: $WSR-275.S1

PW-Sat
Catalog Number: 38083 (?)
Launch Date: Febrauary 13, 2012 1000z
Launch Site: Kourou, French Guiana

Status: On Orbit

Uplink: 435.020 MHz FM
Downlink: 145.900 MHz DSB

Beacon:

Callsign:

URL:

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=132
[10012012]
=====
DO-64 Delfi-C3
Catalog number: 32789
Launch Date: April 28, 2008 0354z
Launch site: Satish Dhawan Space Centre, India

Status: Operational
Current Mode: Science Mode - Beacon ONLY

Telemetry: 145.870 MHz

Downlink: 145.880 to 145.920 MHz
Uplink: 435.530 to 435.570 MHz
```

Delfi-C3 web page: http://www.delfic3.nl/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=68
[02092011]
=====
VO-52 HAMSAT
Catalog number: 28650
Launch Date: May 05, 2005 0444z
Launch site: Satish Dhawan Space Centre, India

Status: Operational
Current Mode: U/v - Dutch Transponder

Frequencies:
Indian Transponder:
Uplink: 435.220 to 435.280 MHz LSB/CW
Downlink: 145.930 to 145.870 MHz USB/CW

Dutch Transponder:
Uplink: 435.225 to 435.275 MHz LSB/CW
Downlink: 145.925 to 145.875 MHz USB/CW

Indian Beacon: 145.9360 MHZ CW
Dutch Beacon: 145.860 MHz 12WPM with CW message

Mode and Antenna Polarization:
V: LHCP
U: RHCP

Official Webpage: http://www.amsatindia.org/hamsat.htm

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=30

To know what transponder is switched on please listen for the beacon
that is active. Each transponder has a different beacon.
[03232012]
=====
SO-50 SAUDISAT-1C
Catalog number: 27607
Launch date: December 20, 2002 1700z
Launch site: Baikonur, Kazakhstan

Status: Operational

Current Mode: V/u

Uplink: 145.850 MHz FM - 67.0 Hz PL tone
Downlink: 436.795 MHz

Mode and Antenna Polarization:
V: Linear
U: Linear

Official Webpage: http://saudisat.kacst.edu.sa/index.shtml
(not up and running currently)

To switch the transmitter on, you need to send a CTCSS tone of 74.4
Hz. The order of operation is thus: (allow for Doppler as necessary):
1) Transmit on 145.850 MHz with a tone of 74.4 Hz to arm the 10 minute
timer on board the spacecraft.
2) Now transmit on 145.850 MHz (FM Voice) using 67.0 Hz to PT the re-
peater on and off within the 10 Minute window.
3) Sending the 74.4 tone again within the 10 minute window will reset
the 10 minute timer.
[02092011]
=====
FO-29 JAS-2
Catalog number: 24278
Launch Date: August 17, 1996

Status: Operational
Current Mode: V/u (Mode JA)

Voice/CW (Mode JA)
Uplink: 145.90 to 146.00 MHz CW/LSB
Downlink: 435.80 to 435.90 MHz CW/USB
Beacon: 435.795 MHz

Digital Mode JD
Uplinks: 145.850 MHz FM
145.870 MHz FM
145.910 MHz FM
Downlink: 435.910 MHz 1200-baud BPSK or 9600-baud FSK
Callsign: 8J1JCS
Digitalker: 435.910 MHz

Mode and Antenna Polarization:
V: RHCP
U: RHCP

For current operational schedule for FO-29:
http://www.ne.jp/asahi/m-arai/gkz/satinfo/fo29e.htm

JARL English webpage:
http://www.jarl.or.jp/English/5_Fuji/ejasmenu.htm

AMSAT-NA Webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID
=5&retURL=/satellites/status.php

Mineo Wakita, JE9PEL, has created a simple decoder program for FO29's
CW telemetry downlink: http://www.ne.jp/asahi/hamradio/je9pel/
fo29cwts.htm
[01122012]
=====
AO-27 AMRAD
Catalog number: 22825

Launch date: September 26, 1993 0140z
Launch site: Kourou, French Guiana

Status: Operational

Current Mode: V/u

Uplink: 145.850 MHz FM
Downlink: 436.797 MHz FM

Mode and Antenna Polarization:
V: Linear
U: Linear

Official Webpage: http://www.ao27.org
[02092011]
=====
AO-7 AMSAT OSCAR 7
Catalog number: 07530
Launch Date: November 15, 1974
Launch site: Vandenberg AFB, California, USA

Status: Operational

Current Mode: Alternating between Mode A and B every 24 hours

Uplink: 145.850 to 145.950 MHz CW/USB Mode A
432.125 to 432.175 MHz CW/LSB Mode B
Downlink: 29.400 to 29.500 MHz CW/USB Mode A (1W PEP)
145.975 to 145.925 MHz CW/USB Mode B (8W PEP)
145.975 to 145.925 MHz CW/USB Mode C (2W PEP)
Beacons: 29.502 MHz CW
145.972 MHz CW
435.100 MHz CW
2304.100 MHz CW

Official Webpage:
http://www.amsat.org/amsat-new/satellites/sat_summary/ao7.php
[04242012]
=====
INTERNATIONAL SPACE STATION (ISS) - ARISS
Catalog number: 25544
Launch date: November 20, 1998 0640z (ZARYA module)
Launch sites: Baikonur, Kazakhstan
Kourou, French Guiana
Uchinoura Space Center, Japan
Kennedy Space Center, Titusville, Florida, USA

Status: Operational

Current Active Modes: FM Repeater - OFF
Voice - V/v
BBS - OFF
2m APRS - ON

2m Digi - ON
70cm APRS - ?
70cm Digi - ?
SSTV - OFF

Expedition 33 Crew (July 2012 - November 2012):
Commander: Sunita Williams KD5PLB
Flight Engineer: Yuri Malenchenko RK3DUP
Flight Engineer: Akihiko Hoshide KE5DNI

Available Modes and Frequencies:
Digital/APRS:
Worldwide 2m packet uplink: 145.825 MHz FM 1k2
Worldwide 2m packet downlink: 145.825 Mhz FM 1k2
Worldwide 70cm packet uplink: 437.550 Mhz FM 1k2
Worldwide 70cm packet downlink: 437.550 Mhz FM 1k2

Voice:
Region 1 voice uplink: 145.200 MHz FM
Region 2/3 voice uplink: 144.490 MHz FM
Worldwide downlink: 145.800 MHz FM

Crossband Repeater:
Repeater Uplinks: 1269.650 MHz FM
437.800 MHz FM
145.990 MHz FM - 67.0 PL (Kenwood)
Repeater Downlink: 145.800 MHz FM
437.800 MHz FM (Kenwood)

SSTV Robot 36:
Downlink: 145.800 MHz FM

Mode and Antenna Polarization:
V: Linear
U: Linear

Callsigns:
Belgian: OR4ISS
German: DP0ISS
Russian: RS0ISS
RZ3DZR
United States: NA1SS
2m Packet Mailbox: RS0ISS-11
2m Digipeater alias: ARISS
70cm Packet Mailbox: RS0ISS-1
70cm Digipeater callsign: RS0ISS
70cm Digipeater alias: ARISS

Official ARISS Webpage: http://www.rac.ca/ariss
ISS Fan Club Webpage: http://www.issfanclub.com
APRS tracking page: http://www.ariss.net/

ISS Daily Crew Schedule: http://spaceflight.nasa.gov/station/timelines
Remember that the crew operates on UTC time. Also, all of the time
line is NOT translated from Russian and posted.
[10012012]
NNNN
/EX

SB SAT @ AMSAT W8ISS $WSR-275.S2
WSR 275 Part 2 10/01/2012

AMSAT NEWS SERVICE BULLETIN 275.S2
FROM AMSAT HQ SILVER SPRING, MD, October 01, 2012
TO ALL RADIO AMATEURS
BID: $WSR-275.S2

Aeneas
Catalog Number: 38760
Launch Date: September 13, 2012 2139z
Launch Site: Wallops Island, Virginia, USA

Status: On Orbit

Uplink: WiFi 2425MHz
Downlink:
WiFi: 2425MHz
Spread Spectrum: Somewhere in the 70cm band

Beacon: 437.600MHz 1k2 ax25 every 10 seconds

Callsign:

URL:
[10012012]
=====
Cinema
Catalog Number: 36764
Launch Date: September 13, 2012 2139z
Launch Site: Wallops Island, Virginia, USA

Status: On Orbit

Uplink:
Downlink:
Engineering: 2400 - 2450MHz
Telemetery: 2200 - 2300MHz

Beacon:

Callsign:

URL:
[10012012]
=====
CSSWE (Colorado Student Space Weather Experiment)
Catalog Number: 38761

Launch Date: September 12, 2012 2139z
Launch Site: Wallops Island, Virginia, USA

Status: On Orbit

Uplink:
Downlink: 437.345MHz 9k6 with ax.25

Beacon:

Callsign:

URL:
[10012012]
=====
CP5 (Polysat)
Catalog Number: 38763
Launch Date: September 12, 2012 2139z
Launch Site: Wallops Island, Virginia, USA

Status: On Orbit

Uplink:
Downlink: 437.405MHz AFSK on LSB ax.25 over NRZI at 1k2 baud,
every 2
minutes, begins 3.5 hours after first turn-on

Beacon:

Callsign:

URL:
[10012012]
=====
CXBN (Cosmic X-Ray Background Nanosatellite)
Catalog Number: 38762
Launch Date: September 12, 2012 2139z
Launch Site: Wallops Island, Virginia, USA

Status: On Orbit

Uplink:
Downlink: 437.525MHz GFSK ax.25

Beacon:

Callsign:

URL:
[10012012]
=====
Proiteres
Catalog Number: 38756
Launch Date: September 09, 2012 2139z
Launch Site: Satish Dhawan Space Centre, India

Status: On Orbit

Uplink:
Downlink: 437.485MHz FM/AFSK

Beacon:

Callsign: JL3YZK

URL:
[10012012]
=====
RS-40 MiR (Yubileiny-2)
Catalog Number: 38735
Launch Date: July 28, 2012

Status: On Orbit

Uplink:
Downlink(s): 435.265 MHz
435.365 MHz

Beacon:

Callsign:

URL:
[08272012]
=====
HORYU-II
Catalog number: 38340
Launch Date: May 17, 2012 1639z

Status: On Orbit

Uplink: 145.??? MHz
Downlink: 437.375 MHz CW/AX25/FSK

Beacon: 437.375 MHz CW

Callsign: JG6YBW

URL:

IARU Coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=216
[10012012]
=====
XaTcobeo
Catalog Number: 38082
Launch Date: Febrauary 13, 2012 1000z
Launch Site: Kourou, French Guiana

Status: Operational

Uplink:
Downlink: 437.365 MHz FFSK with AX.25

Beacon:

Callsign:

URL:

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=135
[100162012]
=====
UniCubeSat
Catalog Number: 38085(?)
Launch Date: Febrauary 13, 2012 1000z
Launch Site: Kourou, French Guiana

Status: Operational

Uplink:
Downlink: 437.305 MHz 9k6 bps GMSK

Beacon:

Callsign:

URL:
http://www.gaussteam.com/index.php?option=com_content&view=article&id=96:uni
cu
besat&catid=36:unicubesat&Itemid=183

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=133
[10012012]
=====
Robusta
Catalog Number: 38083(?)
Launch Date: Febrauary 13, 2012 1000z
Launch Site: Kourou, French Guiana

Status: On Orbit

Uplink:
Downlink: 437.325 MHz 1k2 FM telemetry (data every 3 min, 20 sec. burst)

Beacon:

Callsign:

URL:

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=122
[10012012]
=====
MO-72 MaSat-1
Catalog Number: 38081
Launch Date: Febrauary 13, 2012 1000z

Launch Site: Kourou, French Guiana

Status: Operational

Uplink:
Downlink: 437.345 MHz GFSK 625/1250 bps
437.345 MHz CW

Beacon:

Callsign:

URL:

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=126
[10012012]
=====
Goliat
Catalog Number: 38084(?)
Launch Date: Febrauary 13, 2012 1000z
Launch Site: Kourou, French Guiana

Status: Operational

Uplink:
Downlink: 437.485 MHz 1k2 AFSK

Beacon:

Callsign:

URL:

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=98
[10012012]
=====
E-St@r
Catalog Number: 38079
Launch Date: Febrauary 13, 2012 1000z
Launch Site: Kourou, French Guiana

Status: On Orbit

Uplink:
Downlink: 437.445 MHz 1k2 bps AFSK

Beacon:

Callsign:

URL:

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=130

[10012012]
=====
ALMASat-1
Catalog Number: 38078
Launch Date: Febrauary 13, 2012 1000z
Launch Site: Kourou, French Guiana

Status: On Orbit

Uplink:
Downlink: 437.465 MHz 1k2 bps FSK
2407.850 MHz

Beacon:

Callsign:

URL:

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=39
[10012012]
=====
RS-39 Chibis-M
Catalog Number: 38051
Launch Date: October 30, 2011 10:11:00 UTC
Launch site: Tyuratam (Baikonur Cosmodrome), Kazakhstan

Status: Operational

Uplink:
Downlink:

Beacon: 435.315 MHz CW
435.215 MHz CW

Callsign:

URL:

IARU coordination status page:
[07302012]
=====
JUGNU
Catalog Number: 37839
Launch Date: October 12, 2011 05:30:00 UTC
Launch site: Satish Dhawan Space Centre, India

Status: On Orbit

Uplink: 145.??? MHz 1k2 (mode?)
Downlink: 437.505 MHz 9k6 (mode?)

Beacon: 437.275 MHz 15 wpm (?) CW

Callsign:

URL: http://www.iitk.ac.in/me/jugnu/index.htm

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=160
[07092012]
=====
SRMSAT
Catalog Number: 37841
Launch Date: October 12, 2011 05:30:00 UTC
Launch site: Satish Dhawan Space Centre, India

Status: On Orbit

Uplink: 145.900 MHz 1k AX.25 (speed?)
Downlink: 437.500 MHz 2k4 AX.25

Beacon: 437.425 MHz 12 wpm CW

Callsign:

URL: http://srmsat.in/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=181
[07092012]
=====
HRBE (E1P Explorer 1 [Prime] CubeSat (E1P-U2))
Catalog Number: 37855
Launch Date: October 28, 2011
Launch site: Vandenberg Air Force Base, California, USA

Status: On Orbit

Uplink: 437.305 MHz (???)
Downlink: 437.505 MHz AX.25 (SSB?)

Beacon:

Callsign:

URL: http://ssel.montana.edu/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=116
[01122012]
=====
M-Cubed
Catalog Number: 37855
Launch Date: October 28, 2011
Launch site: Vandenberg Air Force Base, California, USA

Status: On Orbit

Uplink:
Downlink: 437.485 MHz AX.25

Beacon:

Callsign:

URL: http://umcubed.org/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=215
[01122012]
=====
RAX-2
Catalog Number: 37853
Launch Date: October 28, 2011
Launch site: Vandenberg Air Force Base, California, USA

Status: Operational

Uplink:
Downlink: 437.345MHz 9k6 GMSK

Beacon:

Callsign:

URL: http://rax.engin.umich.edu//

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=221
[03232012]
=====
AO-71 AubieSat-1
Catalog Number: 37854
Launch Date: October 28, 2011
Launch site: Vandenberg Air Force Base, California, USA

Status: On Orbit

Uplink:
Downlink: 437.475 MHz 1k2 AX.25

Beacon: 437.475 MHz CW

Callsign: KI4NQO

URL: http://www.space.auburn.edu/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=148
[12262011]
=====
O/OREOS
Catalog Number: 37224
Launch Date: November 20, 2010

Launch site: Kodiak Launch Complex, Alaska, USA

Status: On Orbit

Uplink:
Downlink: 437.035 MHZ AX.25

Beacon:

Callsign:

URL: http://www.ooreos.org/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=146
[02092011]
=====
Rax-1 Radio Aurora Explorer
Catalog Number: 37223
Launch Date: November 20, 2010
Launch site: Kodiak Launch Complex, Alaska, USA

Status: On Orbit

Uplink:
Downlink: 437.505 MHz 9k6 GMSK

Beacon:

Callsign: RAX-1

URL: http://rax.engin.umich.edu/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=165
[02092011]
=====
FO-69 Fastrac-1 Sara Lily
Catalog Number: 37227
Launch Date: November 20, 2010
Launch site: Kodiak Launch Complex, Alaska, USA

Status: Operational

Uplink 1: 145.980 MHz 1k2 baud
Uplink 2: 145.825 MHz 1k2 baud
Downlink: 437.345 MHz 1k2 and 9k6 baud

Beacon: 437.435 MHz 1k2 AX.25

Callsign: Fast1

URL: http://fastrac.ae.utexas.edu/index.php

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=83

[07052011]
=====
FO-70 Fastrac-2 Emma
Catalog Number: 37380
Launch Date: November 20, 2010
Launch site: Kodiak Launch Complex, Alaska, USA

Status: Operational

Uplink 1: 435.025 MHz 1k2 baud
Uplink 2: 437.435 MHz 9k6 baud
Downlink: 145.825 MHz 1k2 and 9k6 baud

Beacon: 145.825 MHz 1k2 AX.25

Callsign: Fast2

URL: http://fastrac.ae.utexas.edu/index.php

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=84
[12162011]
=====
StudSat
Catalog Number: 36796
Launch Date: July 12, 2010 0352z
Launch site: Satish Dhawan Space Centre, India

Status: On Orbit

Uplink: 437.505MHz, 9600bps FSK
Downlink: 437.505MHz, 9600bps FSK
Beacon : 437.505MHz, 20bps ASK

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=164
[02092011]
=====
TIsat-1
Catalog Number: 36799
Launch Date: July 12, 2010 0352z
Launch site: Satish Dhawan Space Centre, India

Status: On orbit

Callsign: HB9DE

Uplink: 145.980MHz FM, AFSK
Downlink: 437.305MHz FM, AFSK
Beacon: 437.305MHz CW

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=118
[02092011]

=====
SwissCube
Catalog Number: 35932
Launch Date: September 23, 2009 0621z
Launch site: Satish Dhawan Space Centre, India

Status: Operational

Callsign: HB9EG

Beacon(100mw): 437.5050MHz CW
Beacon(1w): 437.5050MHz FSK 1k2bps

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=109
[02092011]
=====
UWE-2
Catalog Number: 35934
Launch Date: September 23, 2009 0621z
Launch site: Satish Dhawan Space Centre, India

Status: In Orbit

Beacon(500mw): 437.3850 MHz AFSK 1k2bps
437.3850 MHz FSK 9k6bps

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=110
[02092011]
=====
ITUpsAT1
Catalog Number: 35935
Launch Date: September 23, 2009 0621z
Launch site: Satish Dhawan Space Centre, India

Status: Operational

Beacon(100mw): 437.325MHz CW
Beacon(1w): 437.325MHz 19k2bps

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=113
[02092011]
=====
BEESAT
Catalog Number: 35933
Launch Date: September 23, 2009 0621z
Launch site: Satish Dhawan Space Centre, India

Status: Operational

Callsign: DP0BEE

Beacon(100mw): 436.000MHz CW
Beacon(500mw): 436.000MHz GMSK 4k8bps
Beacon(500mw): 436.000MHz GMSK 9k6bp
[02092011]
=====
CP-6
Catalog Number: 35003
Launch Date: May 19, 2009 2355z
Launch site: Wallops Island, Virginia, USA

Status: Operational

Downlink: 437.365 MHz 1k2 AFSK

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=121
[07302012]
=====
HAWKSAT 1
Catalog number: 35004
Launch Date: May 19, 2009 2355z
Launch site: Wallops Island, Virginia, USA

Status: operational

Downlink: 437.345 MHz ?

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=105
[07302012]
=====
Pharmasat
Catalog Number: 35002
Launch Date: May 19, 2009 2355z
Launch site: Wallops Island, Virginia, USA

Status: Operational

Downlink: 437.465 MHz 1k2 AFSK

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=94
[02092011]
=====
ANUSAT
Catalog Number: 34808
Launch Date: April 20, 2009 0115z
Launch Site: Satish Dhawan Space Centre, India

Status: ?

Downlink: 435.000 MHz
Uplink: 145.800 MHz

Telemetry: 137.400 MHz
[02092011]
=====
SOHLA-1 (ASTRO TECH.)
Catalog Number: 33496
Launch Date: January 23, 2009 0354z
Launch site: Tanegashima Space Center, Japan

Status: Operational

Proposed Frequencies and Modes:
Downlink: 437.505 MHz AFSK/CW
Beacon: 437.505 MHz AFSK/CW

Callsign:

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=101
[02092011]
=====
KAGAYAKI (Solan Co.)
Catalog Number: 33495
Launch Date: January 23, 2009 0354z
Launch site: Tanegashima Space Center, Japan

Status: In Orbit

Downlink: 437.375 MHZ FSK9k6/CW
Beacon: 437.375 MHz FSK9k6/CW

IARU coordination status page:

AMSAT-NA webpage:

[02092011]
=====
STARS (Kagawa Univ.) (Twin Satellites)
Catalog Number: 33498
Launch Date: January 23, 2009 0354z
Launch site: Tanegashima Space Center, Japan

Status: Operational ?

Downlinks: 437.485 MHz FM/CW
437.465 MHz FM/CW
Beacons: 437.305 MHz FM/CW
437.275 MHz FM/CW

Callsigns: JR5YBN
JR5YBO

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=99

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID=121&retURL

=/satellites/status.php
[02092011]
=====
KKS-1 (Tokyo MCIT)
Catalog Number: 33499
Launch Date: January 23, 2009 0354z
Launch site: Tanegashima Space Center, Japan

Status: Operational

Downlink: 437.455 MHz AFSK/CW
Beacon: 437.385 MHz AFSK/CW

Callsign: JQ1YYY

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=107

AMSAT-NA webapge:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID=120&retURL
=/satellites/status.php
[20092011]
=====
PRISM (Tokyo Univ.)
Catalog Number: 33493
Launch Date: January 23, 2009 0354z
Launch site: Tanegashima Space Center, Japan

Status: Operational ?

Downlink: 437.425 MHz AFSK/GMSK/CW
Beacon: 437.250 MHz AFSK/GMSK/CW

Callsign: JQ1YCX

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=97

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID=119&retURL
=/satellites/status.php
[02092011]
=====
RS-30 Radio Sputnik 30 (Yubileiny)
Catalog Number: 32953
Launch Date: May 23, 2008 1520z
Launch site: Plesetsk Missile and Space Complex, Russia

Status: Operational

Curent Modes: Telemetry
Audio
Images

Downlinks: 435.315 MHz
435.215 MHz

AMSAT-NA website:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID=115&ret
URL=/satellites/status.php

Official website:
http://www.npopm.com/?cid=leoca&caid=43
[02092011]
=====
CanX-2
Catalog number: 32790
Launch Date: April 28, 2008 0354z
Launch site: Satish Dhawan Space Centre, India

Status: Operational in range of ground station only

Downlink: 437.478 MHz GFSK

For the latest project status update please visit the Can X-2 web
page: http://www.utias-sfl.net/nanosatellites/CanX2/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=46
[02092011]
=====
AAUSAT-II
Catalog number: 32788
Launch Date: April 28, 2008 0354z
Launch site: Satish Dhawan Space Centre, India

Status: Operational

Downlink: 437.425 MHz 1k2 baud packet

For the latest project status update please visit the AAUSAT-II web
page:
http://www.aausatii.aau.dk/homepage/index.php?language=en&page=home

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=60
[02092011]
=====
CO-65 CUTE-1.7+APD II
Catalog number: 32785
Launch Date: April 28, 2008 0354z
Launch site: Satish Dhawan Space Centre, India

Status: Operational

Downlink: 437.475 MHz 9k6 Packet
Uplink: 1267.600 Mhz

Telemetry Beacon:
Downlink: 437.2750 MHz CW

For the latest project status update please visit the Cute-1.7+APD II
web page: http://lss.mes.titech.ac.jp/ssp/cute1.7/index_e.html

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=78

Command Station blog website:
http://lss.mes.titech.ac.jp/ssp/cute1.7/blog/

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID=112&retURL
=/satellites/status.php
[03232012]
=====
Compass-1
Catalog number: 32787
Launch Date: April 28, 2008 0354z
Launch site: Satish Dhawan Space Centre, India

Status: Operational

Current Mode: dependant on last received command

Uplink: 145.980 MHz FM
Downlink: 437.275 Mhz CW
437.405 MHz Packet

For the latest project status update please visit the Compass 1 web
page: http://www.raumfahrt.fh-aachen.de/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=52

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID=114&retURL
=/satellites/status.php
[06162011]
=====
CO-66 Seeds II
Catalog number: 32791
Launch Date: April 28, 2008 0354z
Launch site: Satish Dhawan Space Centre, India

Status: Operational

Downlink: 437.485 MHz

Callsign: JQ1YGU

For the latest project status update please visit the Seeds 2 web
page: http://cubesat.aero.cst.nihon-u.ac.jp/english/seeds_2_e.html

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=36

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID=113&retURL
=/satellites/status.php
[073092011]
=====
CAPE-1
Catalog Number: 31130
Launch Date: April 17,2007 0702z
Launch site: Baikonur, Kazakhstan

Status: Intermittent

Current Mode: /u

TLM Downlink: 435.245 MHz 9600 bs FSK AX.25
CW Beacon: 435.245 MHz CW

Callsign: K5USL

TLM and CW interchange every 30 seconds.

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID=94&retURL=
/satellites/status.php

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=72
[02092011]
=====
CP3
Catalog Number: 31129
Launch Date: April 17,2007 0702z
Launch site: Baikonur, Kazakhstan

Status: Operational

Current Mode: /u

Downlink: 436.845 MHz 1200 bps AFSK AX.25

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=74
[02092011]
=====
CO-58 CubeSat XI-V
Catalog number: 28895
Launch Date: October 27, 2005 0652z
Launch site: Plesetsk Missile and Space Complex, Russia

Status: Operational - CW Beacon only

Current Mode: /u

Telemetry Downlink: 437.4250 MHz AFSK 1200bps using AFK protocol
Beacon: 437.2750 MHz CW

Callsign: JQ1YGW

Official Webpage: http://www.space.t.u-tokyo.ac.jp/cubesat/mission/V/

Pictures received by Mineo Wakita - JE9PEL:
http://www.ne.jp/asahi/hamradio/je9pel/xivpicte.htm

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=37
[02092011]
=====
CO-57 CubeSat XI-IV
Catalog number: 27848
Launch date: June 30, 2003 1415z
Launch site: Plesetsk Missile and Space Complex, Russia

Status: ?????

Current Mode: /u

Beacon: 436.8475 MHz CW
Telemetry : 437.4900 MHz AFSK 1200 BPS

Callsign: JQ1YGW

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID=96&retURL
=/satellites/status.php

Official Webpage: http://www.space.t.u-tokyo.ac.jp/cubesat/mission/V/
[02092011]
=====
QuakeSat
Catalog Number: 27845
Launch Date: June 30, 2003 1415z
Launch site: Plesetsk Missile and Space Complex, Russia

Status: Telemetry only

Current Mode: 9600 baud data packet

Mode U packet
Downlink: 436.675 MHz 9k6 BPS

Quakesat webpage:
http://www.quakefinder.com/services/quakesat-ssite/
[02252011]
=====
CO-55 Cute-1.7+APD II
Catalog Number: 27844
Launch date: June 30, 2003 1415z
Launch site: Plesetsk Missile and Space Complex, Russia

Status: Operational

Current Mode: CW downlink worldwide
AX25 Packet with uplink command over Japan only

Mode U Telemetry
Downlink: 437.4000 MHz AFSK 1200 BPS

Mode U TLM Beacon
Downlink: 436.8375 MHz CW

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID=69&retURL
=/satellites/status.php

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=78
[02092011]
=====
NO-44 PCSAT
Catalog number: 26931
Launch Date: September 30, 2001 0240z
Launch site: Kodiak Launch Complex, Alaska, USA

Status: Telemetry only

Current Mode: V/v

General Usage Uplink/Downlink: 145.827 MHz 1200 Baud
Special Usage Downlink: 144.390 Mhz 1200 Baud

PCSAT APRS page: http://pcsat.aprs.org

aprstlm Telemetry Decoder program:
http://www.xciv.org/~iain/aprstlm/v1.2/
[02092011]
=====
RS-22 RADIO SPORT 22 (MOZHAYETS 4)
Catalog number: 27939
Launch Date: September 27, 2003 0612z
Launch site: Plesetsk Missile and Space Complex, Russia

Status: Operational - 70cm cw only

Current Mode: /u

CW Beacon - 435.352 MHz
145.818 MHz

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID=76&retURL
=/satellites/status.php
[02092011]
=====
LO-19 LUSAT
Catalog number: 20442

Launch date: January 22, 1990
Launch site: Kourou, French Guiana

Status: CW Beacon only

Uplinks: 145.840 MHz 1200-baud Manchester FSK
145.860 MHz 1200-baud Manchester FSK
145.880 MHz 1200-baud Manchester FSK
145.900 MHz 1200-baud Manchester FSK

CW downlink: 437.125 MHz

Digital downlink: 437.150 MHz SSB (RC-BPSK 1200-baud PSK)

Broadcast Callsign: LUSAT-11
BBS: LUSAT-12

General information and telemetry samples can be found at:
www.telecable.es/personales/ea1bcu
[02092011]
=====
UO-11 OSCAR-11
Catalog number: 14781
Launch Date: March 1, 1984
Launch site: Vandenburg AFB, California, USA

Status: Operational ?

Current Mode: /v

Telemetry Downlink: 145.825 MHz FM 1200 AFSK
UHFBeacon: 435.025 MHz
Mode-S Beacon: 2401.500 MHz

Mode and Antenna Polarization:
V: RHCP
S: LHCP

Webpage: http://www.users.zetnet.co.uk/clivew/
MPEG3 files: http://www.ne.jp/asahi/hamradio/je9pel/uo11tlme.htm
[07052011]
=====
INTERNATIONAL SPACE STATION (ISS) - ARISS
Catalog number: 25544
Launch date: November 20, 1998 0640z (ZARYA module)
Launch sites: Baikonur, Kazakhstan
Kourou, French Guiana
Uchinoura Space Center, Japan
Kennedy Space Center, Titusville, Florida, USA

Status: Operational

Current Active Modes: FM Repeater - OFF
Voice - V/v

BBS - U/u
2m APRS - ON
2m Digi - ON
70cm APRS - ?
70cm Digi - ?
SSTV - OFF

Expedition 33 Crew (July 2012 - November 2012):
Commander: Sunita Williams KD5PLB
Flight Engineer: Yuri Malenchenko RK3DUP
Flight Engineer: Akihiko Hoshide KE5DNI

Available Modes and Frequencies:
Digital/APRS:
Worldwide 2m packet uplink: 145.825 MHz FM 1k2
Worldwide 2m packet downlink: 145.825 Mhz FM 1k2
Worldwide 70cm packet uplink: 437.550 Mhz FM 1k2
Worldwide 70cm packet downlink: 437.550 Mhz FM 1k2

Voice:
Region 1 voice uplink: 145.200 MHz FM
Region 2/3 voice uplink: 144.490 MHz FM
Worldwide downlink: 145.800 MHz FM

Crossband Repeater:
Repeater Uplinks: 1269.650 MHz FM
437.800 MHz FM
145.990 MHz FM - 67.0 PL (Kenwood)
Repeater Downlink: 145.800 MHz FM
437.800 MHz FM (Kenwood)

SSTV Robot 36:
Downlink: 145.800 MHz FM

Mode and Antenna Polarization:
V: Linear
U: Linear

Callsigns:
Belgian: OR4ISS
German: DP0ISS
Russian: RS0ISS
RZ3DZR
United States: NA1SS
2m Packet Mailbox: RS0ISS-11
2m Digipeater alias: ARISS
70cm Packet Mailbox: RS0ISS-1
70cm Digipeater callsign: RS0ISS
70cm Digipeater alias: ARISS

Official ARISS Webpage: http://www.rac.ca/ariss
ISS Fan Club Webpage: http://www.issfanclub.com
APRS tracking page: http://www.ariss.net/

ISS Daily Crew Schedule: http://spaceflight.nasa.gov/station/timelines
Remember that the crew operates on UTC time. Also, all of the time
line is NOT translated from Russian and posted.
[09102012]
NNNN
/EX

SB SAT @ AMSAT W8ISS $WSR-275.S3
WSR 275 Part 3 10/01/2012

AMSAT NEWS SERVICE BULLETIN 275.S3
FROM AMSAT HQ SILVER SPRING, MD, October 01, 2012
TO ALL RADIO AMATEURS
BID: $WSR-275.S3

THE FOLLOWING ARE IN ORBIT BUT ARE NON-OPERATIONAL AT THIS TIME:

NANOSAIL-D
Catalog Number: 37361
Ejection Date: January 17, 2011

Status: Non - Operational

Downlink: 437.270 MHz AX.25

URL: http://nanosaild.engr.scu.edu/dashboard.htm

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=115
[07302012]
=====
HO-68 HOPE-1 (CAS-1) (XW-1)
Catalog Number: 36122
Launch Date: December 15, 2009 0231z
Launch site: Taiyuan Space Center, PRC

Status: Telemetry only

Callsign:
Broadcast: BJ1SA-11
BBS: BJ1SA-12

Uplinks: 145.8250 MHz FM, PL 67.0 Hz.
145.9250 - 145.9750 MHz SSB/CW
145.8250 MHz AFSK 1200 BPS
Downlinks: 435.6750 MHz FM
435.7650 - 435.7150 MHz SSB/CW
435.6750 MHz AFSK 1200 BPS

Beacon: 435.7900 MHz CW

Mode and Antenna Polarization:
V: LHCP 2.0dBi max
U: RHCP 3.0dBi max

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=108

For more information about XW-1 (CAS-1):
http://
[04302012]
=====
SO-67 SumbandilaSat
Catalog Number: 35870
Launch Date: September 17, 2009 1555z
Launch site: Baikonur, Kazakhstan

Status: Non - Operational

Callsign: ZS0SUM

Uplink: 145.875MHz FM tone 233.6 Hz
Downlink: 435.345MHz FM

Mode and Antenna Polarization:
V: Linear
U: Linear

For more information about SO-67:
http://www.amsatsa.org.za/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=88
[01272012]
=====
CP4
Catalog Number: 31132
Launch Date: April 17, 2007

Status: Non-Operational

Current Mode: /u

TLM Downlink: 437.325 MHz 1200 bps FSK AX.25
CW Beacon: 437.325 MHz CW

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=79
[09062010]
=====
LIBERTAD-1
Catalog Number: 31128
Launch Date: April 17, 2007

Status: Non-Operational

Current Mode: V/u APRS Packet ax25

Callsign: 5K3L

Uplink: 145.825 MHz 1200 AFSK ax25 APRS
Downlink: 437.399 MHz 1200 AFSK ax25 APRS

Telemetry Beacon: 437.4050 MHz 1200 AFSK ax25

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=76
[09062010]
=====
PO-63 PEHUENSAT-1
Catalog Number: 29712
Launch Date: January 10, 2007

Status: Non-Operational

Current Mode: V/v

Uplink/Downlink: 145.825 Mhz FM
Voice Recorder: 145.825 Mhz FM

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=51
[09062010]
=====
NCUBE-2
Catalog number: 28897
Launch Date: October 27, 2005

Status: Still attached to XO-53 (SSETI)?

Proposed Callsign: TBA
Proposed Transmit Frequency: 437.305
2407.250

Official Website: http://www.ncube.no

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=24
[09062010]
=====
XO-53 SSETI
Catalog number: 28894
Launch Date: October 27, 2005

Status: Non-operational

Voice Uplink: 437.250 MHz FM 67Hz CTCSS
Voice Downlink: 2401.835 MHz FM
Packet Up/Downlink: 437.250 MHz 9k6 packet
Packet Downlink 2401.835 MHz 38k4 packet

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=54
[09062010]
=====

UWE-1
Catalog Number: 28892
Launch Date: October 27, 2005

Status: Non-Operational

Mode U Telemetry
Downlink: 437.5050 MHz 9600 AFSK

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=53
[09062010]
=====
AO-51 ECHO
Catalog number: 28375
Launch date: June 29, 2004 0745z
Launch site: Baikonur, Kazakhstan

Status: Non - Operational

Current Mode(s):
Voice repeater: V/u
Uplink: 145.880 MHz FM
Downlink: 435.150 MHz FM

Telemetry: Recovery efforts
Downlink: 435.150MHz 9k6

Analog voice downlink: 435.300 MHz FM
435.150 MHz FM
2401.200 Mhz FM
Analog voice uplink: 145.860 MHZ FM
145.880 MHz USB
145.880 MHz FM
145.920 MHz FM
145.920 MHz FM - 67 Hz PL tone burst
1268.705 MHz FM
Digital Downlinks: 435.150 MHz FM 38k4 PBP, 1 watt output
435.150 MHz FM 9k6 Pacsat Broadcast Protocol
2401.200 MHz FM 38k4 bps, AX.25
Digital Uplink: 145.860 MHz FM 9k6 Pacsat Broadcast Protocol
1268.703 mhz FM 9k6 Pacsat Broadcast Protocol
Beacon: 435.150 MHz

Mode and Antenna Polarization:
T: Linear
V: Linear
U: TX A (usually digital)LHCP
TX B (usually analog) RHCP
L: Linear
S: Linear

Broadcast: PECHO-11
BBS: PECHO-12

Official Webpage: http://www.amsat.org/amsat-new/echo/CTNews.php

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=19
[12062011]
=====
CANX-1
Catalog Number: 27847
Launch Date: June 30, 2003

Status: Non-Operational

Downlink: 437.8800 MHz AFSK 1k2bps
[06052009]
=====
DTUSAT
Catalog Number: 27842
Launch Date: June 30, 2003

Status: Non-Operational

Current Mode: 2k4 AFSK Packet last reported

Downlink: 437.475MHz

Officail webpage: http://dtusat1.dtusat.dtu.dk/

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID=101&retURL
=satellites/all_oscars.php
[02212009]
=====
AO-49 AATiS OSCAR-49 (SAFIR-M)
Catalog number: 27605
Launch Date: December 20, 2002

Status: Non-operational.

Uplink: 435.275 MHz 1200-baud AFSK
Downlink: 145.825 MHz 9600-baud FSK
(optional voice message)

Broadcast callsign: DP0AIS

Official webpage: http://amend.gmxhome.de
[01222007]
=====
MO-46 TIUNGSAT-1
Catalog number: 26548
Launch date: September 26, 2000

Status: Telemetry only

Uplinks: 145.850 MHz
145.925 MHz 9600-baud FSK
Downlink: 437.325 MHz

Broadcast callsign: MYSAT3-11
BBS: MYSAT3-12

TiungSat-1 is Malaysia's first micro-satellite and in addition to
commercial land and weather imaging payloads offers FM and FSK
Amateur Radio communication.

TiungSat-1, named after the mynah bird of Malaysia, was developed as
a collaborative effort between the Malaysian government and Surrey
Satellite Technology Ltd.
[03302009]
=====
NO-45 SAPPHIRE
Catalog number: 26932
Launch Date: September 30, 2001

Status: Non-Operational

Downlink: 437.095 MHz 1200 baud AX-25 AFSK
Uplink: 145.945 MHz UI Digipeater
Digi Callsign: KE6QMD

Everyone is welcome to use the digipeating/APRS features of Sapphire,
as per the user service agreement located at the following URL:
http://web.usna.navy.mil/~bruninga/pcsat/contract.txt
[03132005]
=====
SO-42 SAUDISAT-1B
Catalog number: 26549
Launch date: September 26, 2000

Status: Non-Operational

Downlink: 437.075 MHz

Broadcast Callsign: SASAT2-11
BBS: SASAT2-12

Further information is available at:
http://www.amsat.org/amsat/sats/n7hpr/so42.html
[01222007]
=====
SO-41 SAUDISAT-1A
Catalog number: 26545
Launch Date: September 26, 2000

Status: Non-Operational

Uplink: 145.850 MHz
Downlink: 436.775 MHz

Broadcast Callsign: SASAT1-11
BBS: SASAT1-12

Further information is available at:
http://www.amsat.org/amsat/sats/n7hpr/so41.html
[01222007]
=====
AO-40 AMSAT OSCAR 40
Catalog number: 26609
Launch Date: November 16, 2000

Status: Non-Operational

Uplinks

V-band: 145.840 - 145.990 MHz CW/LSB
U-band: 435.550 - 435.800 MHz CW/LSB
L1-band: 1269.250 - 1269.500 MHz CW/LSB
L2-band: 1268.325 - 1268.575 MHz CW/LSB

Downlinks

S2-band: 2401.225 - 2401.475 MHz CW/USB
K-band: 24048.010 - 24048.060 MHz CW/USB
Beacon: 2401.323 MHz
24048.035 MHz

P3-D Telemetry Beacons (IHU)

BEACON General Beacon(GB) Middle Beacon(MB) Engineering Beacon(EB)
2 m none 145.898 MHz none
70cm 435.438 MHz 435.588 MHz 435.838 MHz
13cm(1) 2400.188 MHz 2400.338 MHz 2400.588 MHz
13cm(2) 2401.173 MHz 2401.323 MHz 2401.573 MHz
3cm 10450.975 MHz 10451.125 MHz 10451.375 MHz
1.5cm 24047.885 MHz 24048.035 MHz 24048.285 MHz
[07162007]
=====
OO-38 OPAL
Catalog Number: 26063
Launch Date: January 27, 2000

Status: Non-Operational

Mode U TLM Beacon
Downlink: 437.1000 MHz 9600 FSK
[08132007]
=====
UO-36 UoSAT-12
Catalog number: 25693
Launch date: April 21, 1999

Status: Unknown

Uplink: 145.960 MHz (9600-baud FSK)
Downlinks: 437.025 MHz
437.400 MHz

Broadcast Callsign: UO121-11
BBS: UO121-12

The VK5HI viewer shareware for UO-36 is available on the AMSAT-NA web
site at the following URL:
ftp://ftp.amsat.org/amsat/software/win32/display/ccddsp97-119.zip
[01222007]
=====
SO-35 SUNSAT
Catalog Number: 25636
Launch date:February 23, 1999

Status: Non-Operational

Downlink: Mode B Repeater: 436.291 MHz
Mode J Digipeater: 436.250 MHz

Uplinks: Mode B Repeater: 145.825 MHz
Mode J Digipeater: 145.825 MHz
145.900 MHz

For more information of SUNSAT vist the satellite web site:
http://esl.ee.sun.ac.za/projects/sunsat/
[01222007]
=====
PO-34 PANSAT
Catalog number: 25520
Launch date: October 30, 1998

Status: Telemetry downloads only

Uplink/downlink: 436.500 MHz

Official Webpage: http://www.sp.nps.navy.mil/pansat/
[05092004]
=====
SO-33 SEDSAT-1
Catalog number: 25509
Launch date: October 24, 1998

Status: Semi-operational

Downlink: 437.910 MHz FM (9600-baud FSK)

The satellite is not currently available for uplink transmissions and
the image and transponder recovery efforts have been unsuccessful.

For more information on SedSat-1 visit the satellite web site:
http://seds.uah.edu/projects/sedsat/sedsat.htm
[09042006]
=====

GO-32 Gurwin TechSat-1B
Catalog number: 25397
Launch Date: July 10, 1998

Status: Non-Operational

Current Modes:
Telemetry : /u

Downlink: 435.225 MHz FM (9600-baud FSK)
435.325 Mhz - Not Available - temperature problems
Uplinks: 145.850 FM
145.890 FM
145.930 FM
1269.700 FM
1269.800 FM
1269.900 FM

Broadcast Callsign: 4XTECH-11
BBS Callsign: 4XTECH-12

More information of GO-32 can be found at:
http://asri.technion.ac.il/techsat/

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID=14&retURL
=/satellites/status.php
[07172010]
=====
TO-31 TMSAT-1
Catalog number: 25396
Launch Date: July 10, 1998

Status: Non-operational

Uplink: 145.925 MHz 9600 baud FSK
Downlink: 436.925 MHz 9600 baud FSK

Broadcast callsign: TMSAT1-11
BBS: TMSAT1-12
[05012006]
=====
MO-30 UNAMSAT-2
Catalog Number: 24305
Launch Date: September 5, 1996

Status: Non-operational

Downlink: 435.1380 MHz AFSK 1200 BPS
Downlink: 435.2060 MHz AFSK 1200 BPS
Uplink: 145.8150 MHz AFSK 1200 BPS
Uplink: 145.8350 MHz AFSK 1200 BPS
Uplink: 145.8550 MHz AFSK 1200 BPS
Uplink: 145.8750 MHz AFSK 1200 BPS

[06042009]
=====
PO-28 POSAT-1
Catalog number: 22829
Launch Date: September 25, 1993

Status: Non-operational

Downlink: 429.950
Uplink: Not until handover back to Amatuer usage

Broadcast callsign: POSAT1-11
BBS callsign: POSAT1-12

AMSAT Webpage: http://www.amsat.org/amsat/sats/n7hpr/po28.html
POSAT-1 webpage:
http://www.ee.surrey.ac.uk/SSC/CSER/UOSAT/missions/posat1.html
[01012009]
=====
IO-26 ITAMSAT
Catalog number: 22826
Launch Date: September 26, 1993

Status: PSK carrier only

Current Mode:

Uplinks: 145.875 MHz FM 1200-baud
145.900 MHz FM 1200-baud
145.925 MHz FM 1200-baud
145.950 MHz FM 1200-baud

Downlink: 435.808 MHz PSK

Broadcast Callsign: ITMSAT-11
BBS: ITMSAT-12

Official webpage: http://www.itamsat.org
AMSAT Webpage: http://www.amsat.org/amsat/sats/n7hpr/io26.html
[01212007]
=====
KO-25 KITSAT
Catalog number: 22828
Launch date: September 26, 1993

Status: Non-operational

Uplink: 145.980 MHz FM 9600-baud FSK
Downlink: 436.500 MHz FM

Broadcast Callsign: HL02-11
BBS: HL02-12
[05092004]
=====

AO-24 ARSENE
Catalog Number: 22654
Launch Date: May 13, 1993

Status: Non-operational

Uplink: 435.0625 MHz FM 1k2bps AFSK
435.1125 MHz FM 1k2bps AFSK
435.1375 MHz FM 1k2bps AFSK
Downlink: 145.9750 MHz FM 1k2bps AFSK
2446.5025 MHz FM 1k2bps AFSK

Beacon: 2446.4700 MHz CW

Broadcast callsign:
BBS:
[12162009]
=====
KO-23 KITSAT
Catalog number: 22077
Launch date: August 10, 1992

Status: Non-operational

Uplink: 145.900 MHz FM (9600-baud FSK)
Downlink: 435.170 MHz FM

Broadcast Callsign: HLO1-11
BBS: HLO1-12
[01222007]
=====
UO-22 UOSAT
Catalog number: 21575
Launch date: July 17, 1991

Status: Non-Operational

Uplink: 145.900 FM 9600-baud FSK
Downlink: 435.120 MHz FM

Broadcast Callsign: UOSAT5-11
BBS: UOSAT5-12
[01222007]
=====
AO-21 AMSAT-OSCAR 21
Catalog Number: 21087
Launch Date: January 29, 1991

Status: Non-Operational

Uplink: 435.041 MHz FM DSP
Downlink: 145.983 MHz FM DSP
[01222007]
=====

FO-20 JAS-1b
Catalog number: 20480
Launch Date: February 07, 1990

Status: Non-Operational

Beacons: 435.795 MHz CW
435.910 MHz AX25

Voice Transponder:
Uplink: 145.900 to 146.000 MHz CW/LSB
Downlink: 435.800 to 435.900 MHz CW/USB

Digital Transponder:
Uplinks: 145.850 MHz
145.870 MHz
145.890 MHz
145.910 MHz
Downlink: 435.910 MHz

More FO-20 info can be found at:
http://www.amsat.org/amsat/sats/n7hpr/fo20.html
[01152007]
=====
WO-18 WEBERSAT
Catalog Number: 20441
Launch Date: January 22, 1990

Status: Non-Operational

Downlink: 437.104 MHz SSB 1200 Baud PSK AX.25
[05012006]
=====
DO-17 Dove
Catalog Number: 20440
Launch Date: January 22, 1990

Status: Non-operational.

Downlink: 145.825 MHz FM 1200 Baud AFSK
Beacon: 2401.220 MHz
[05012006]
=====
AO-16 PACSAT
Catalog number: 20439
Launch Date: January 22, 1990

Status: non-operational

Current Mode: V/u

Uplink: 145.900 MHz FM 1200-baud Manchester FSK (reserved)
145.920 MHz FM VOICE
145.940 MHz FM 1200-baud Manchester FSK (reserved)

145.960 MHz FM 1200-baud Manchester FSK (reserved)

Downlink: 437.026 MHz USB VOICE
(1200-baud PSK - MBL Telemetry Only)

Mode-S Beacon: 2401.1428 MHz [NO FUTURE OPERATIONS PLANNED]

Mode and Antenna Polarization:
U: RC 437.050 MHz RHCP
PSK 437.026 MHz LHCP
V: Linear

Broadcast Callsign: PACSAT-11
BBS: PACSAT-12

AO-16 AMSAT Webpage: http://www.amsat.org/amsat/sats/n7hpr/ao16.html
[07242009]
=====
UO-15 UoSAT-4
Catalog Number: 20438
Launch Date: January 22, 1990

Status: Non-operational

Uplink: ?
Downlink: 435.1250MHz (?)
435.1200MHz (?)
[06042009]
=====
UO-14 UoSAT-3
Catalog number: 20437
Launch date: January 22, 1990

Status: Non-operational

Uplink: 145.975 MHz FM
Downlink: 435.070 MHz FM
[05092004]
=====
FO-12 Fuji-OSCAR 12
Catalog Number: 16909
Launch Date: August 12, 1986

Status: Non-Operational

Mode V/U (J) Linear Transponder (Inverting):
Uplink: 145.9000 - 146.0000 MHz SSB/CW
Downlink 435.8000 - 435.9000 MHz SSB/CW

Mode V/U (J) Packet:
Uplink: 145.8500 MHz MFSK 1200 BPS
Uplink: 145.8700 MHz MFSK 1200 BPS
Uplink: 145.8900 MHz MFSK 1200 BPS
Uplink: 145.9100 MHz MFSK 1200 BPS

Downlink 435.9100 MHz PSK 1200 BPS

Telemetry Beacon: 435.7950 MHz SSB/CW
[01152007]
=====
AO-10 OSCAR 10
Catalog number: 14129
Launch Date: June 16, 1983

Status: Non-operational

Uplink: 435.030 to 435.180 MHz CW/LSB
Downlink: 145.975 to 145.825 MHz CW/USB

Beacon: 145.810 MHz (unmodulated carrier)

W4SM has more information about the satellite at the following URL:
http://www.cstone.net/~w4sm/AO-10.html
[05092004]
=====
AO-8 AMSAT-OSCAR 8
Catalog Number: 10703
Launch Date: March 3, 1978

Status: Non-Operational

Mode V/U (J) Linear Transponder (Non-Inverting): Non-Operational
Uplink: 145.9000 - 146.0000 MHz SSB/CW
Downlink 435.1990 - 435.2000 MHz SSB/CW

Mode V/U (J) TLM Beacon: Non-Operational
Downlink 435.0950 MHz CW

Mode V/A (A) Linear Transponder (Non-Inverting): Non-Operational
Uplink: 145.8500 - 145.9000 MHz SSB/CW
Downlink 29.4000 - 29.5000 MHz SSB/CW

Mode V/A (A) TLM Beacon: Non-Operational
Downlink 29.4020 MHz CW
[01152007]
=====
AO-6 AMSAT-OSCAR 6
Catalog Number: 06236
Launch Date: October 15, 1972

Status: Non-Operational

Uplink: 145.9000 - 146.0000 MHz SSB/CW
Downlink: 29.4500 - 29.5500 MHz SSB/CW
Beacons: 29.450 MHz
435.100 MHz
[01312008]
=====
AO-5 Australis-OSCAR 5
Catalog Number: 04321

Launch Date: January 23, 1970

Status: Non-Operational

Telemetry Beacons: 144.0500 MHz CW
29.4500 MHz CW
[01152007]
=====
OSCAR III
Catalog Number: 01293
Launch Date: March 09, 1965

Status: Non-Operational

Uplink: 145.9750 - 146.0250 MHz SSB/CW
Downlink: 144.3250 - 144.3750 MHz SSB/CW
[01012007]
=====
RS-15 RADIO SPORT RS-15
Catalog number: 23439
Launch Date: December 26, 1994

Status: Non-operational

Uplink: 145.858 to 145.898 MHz CW/USB
Downlink: 29.354 to 29.394 MHz CW/USB

Beacon 1: 29.352 MHz (intermittent)
Beacon 2: 29.398 MHz

SSB meeting frequency: 29.380 MHz (unofficial)
[06202004]
=====
RS-13 RADIO SPORT RS-13
Catalog number: 21089
Launch date: February 5, 1991

Status: Non-operational

Uplink: 21.260 to 21.300 MHz CW/USB
Downlink: 145.860 to 145.900 MHz CW/USB

Beacon: 145.860 MHz

Robot: 145.908 MHz
[05232004]
=====
RS-12 RADIO SPORT RS-12
Catalog number: 21089
Launch date: February 5, 1991

Status: Non-operational

Uplink: 21.210 to 21.250 MHz CW/USB
Downlink: 29.410 to 29.450 MHz CW/USB

Beacon: 29.408 MHz

Robot: 29.454 MHz
[05232004]
NNNN
/EX

SB SAT @ AMSAT W8ISS $WSR-275.S4
WSR 275 Part 4 10/01/2012

AMSAT NEWS SERVICE BULLETIN 275.S4
FROM AMSAT HQ SILVER SPRING, MD, October 01, 2012
TO ALL RADIO AMATEURS
BID: $WSR-275.S4

THE FOLLOWING SATELLITES HAVE RE-ENTERED OR HAVE BEEN RETURNED SAFELY:

ARISSat-1
Catalog number: 37772
Launch date: August 03, 2011 1843z
Launch site: International Space Station

Status: Re-entered January 05, 2012

Callsign: RS01S

Current Mode(s):
Linear Transponder: U/v
Uplink: 435.758 to 435.742 MHz CW/LSB
Downlink: 145.922 to 145.938 MHz CW/USB

FM Telemetry/SSTV/Messages/ID:
Downlink: 145.950 MHz FM

Telemetry/Beacon:
Downlink: 145.939 MHz CW1
145.919 MHz CW2
145.920 MHz 1k BPSK USB
145.920 MHz 400b BPSK USB

Official Webpage:http://www.amsat.org/amsat-new/ARISSat/ARISSat.php

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/informal_detail.php?serialnum=89
[01052012]
=====
CAERUS
Catalog Number:
Launch Date: December 08, 2010 15:43:00 UTC
Launch site: Kennedy Space Center, Titusville, Florida, USA

Status: Re-entered December 22, 2010

Uplink:
Downlink: 437.600 MHz 1k2 AX.25

Beacon: 437.600 MHz CW

Callsign: KJ6FIX

URL:
http://www2.isi.edu/research/prj-serc/prj-serc_projects/prj-serc_projects-8.
htm

IARU coordination status page:

[11102011]
=====
CO-56 CUTE-1.7 + APD
Catalog number: 28941
Launch date: February 21, 2006

Status: Re-entered
Re-entered: October 25, 2009

Uplink: 1268.5000 MHz GMSK 9600 BPS
Downlink: 437.4700 MHz 1200 FM ax25 or SRLL (ACTIVE only near Japan?)

Telemetry Beacon: 437.3850 CW
Callsign: JQ1YPC

Information webpage:
http://lss.mes.titech.ac.jp/ssp/spacerium/cute1blog/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=56
[09062010]
=====
BEVO-1 (DRAGONSAT-1)
Catalog Number: 35690
Launch Date: May 19, 2009

Status: Re-entered
Re-entered:

Downlink: 437.325 MHz 9k6 GMSK
437.325 MHz CW 20wpm

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=117
[07312009]
=====
AggieSat2 (DRAGONSAT-2)
Catalog Number: 35690
Launch Date: May 19, 2009

Status: Re-entered
Re-entered:

Downlink: 436.250 MHz 9k6 FHSS
[11112009]
=====

Pollux
Catalog Number: 35693
Launch Date: July 31, 2009

Status: Re-entered
Re-entered:

Callsign: POLLUX-1

Downlink: 145.825MHz 1k2 AX.25

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=139
[09062010]
=====
Castor (ANDE-2)
Catalog Number: 35694
Launch Date: July 31, 2009

Status: Re-entered
Re-entered:

Callsign: KD4HBO-1

Downlink: 145.825 MHz 1k2 AX.25

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=144
[09062010]
=====
NO-62 FCAL
Catalog Number: 29667
Launch Date: December 21, 2006

Status: Re-Entered
Re-entered: July 28, 2008

Downlink: 437.385 Mhz APRS AX25

Downlink ID: KD4HBO

Website: http://eng.usna.navy.mil/~bruninga/fcal.html

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=59
[01012009]
=====
NO-61 ANDE
Catalog Number: 29664
Launch Date: December 21, 2006

Status: Re-Entered
Re-entered: December 25, 2007

Uplink/Downlink: 145.825 Mhz FM APRS AX25
[01032008]
=====
NO-60 RAFT-1
Catalog Number: 29661
Launch Date: December 21, 2006

Status: Re-Entered
Re-entered: May 30, 2007

Main Downlink: 145.825 Mhz FM APRS AX25
APRS Uplink: 145.825 MHz FM APRS AX25
Voice/PSK31 Uplink: 28.120 MHz

Packet to Voice ID: RAFT
[06112007]
=====
GENESAT-1
Catalog Number: 29655
Launch Date: December 16, 2006

Status: Re-Entered
Re-entered date: August 8, 2010

Current Mode: /u

Callsign: KE7EGC

Telemetry Beacon Downlink: 437.0695 MHz AFSK 1200 BPS

Official webpage: http://www.crestnrp.org/genesat1/ahc.html
[08082010]
=====
HO-59 HITSat
Catalog number: 29484
Launch date: September 22, 2006

Status: Re-Entered
Re-entered: June 18, 2008

Telemetry Downlink: 437.4250 MHz AFSK 1200 BPS
Beacon: 437.2750 MHz CW

Callsign: JR8YJT
[01012009]
=====
SO-43 Starshine 3
Catalog Number: 26929
Launch Date: September 30, 2001

Status: Re-Entered
Re-entered: January 21, 2003

Beacon: 145.825Mhz
[02212009]

NNNN
/EX

ANS is released worldwide via the AMSAT ANS e-mail reflector and a live radiocast on the AMSAT-NA 20-meter net held each Sunday on 14.282 MHz. Pre-net operations start at 18:00 UTC, with current ANS bulletins transmitted to the eastern U.S. at 19:00 UTC and to the western U.S. at 19:30 UTC.

Information on AMSAT-NA is available at the following URL:
http://www.amsat.org

Mailing address:
AMSAT-NA
850 Sligo Avenue, Suite 600
Silver Spring, Maryland 20910-4703

Voice: 301-589-6062
888-322-6728
FAX: 301-608-3410

Currently, AMSAT-NA supports the following (free) mailing lists:

* AMSAT News Service (ANS)
* General satellite discussion (AMSAT-BB)
* Orbit data (KEPS)
* Manned space missions (SAREX)
* District of Columbia area (AMSAT-DC)
* New England area (AMSAT-NE)
* AMSAT Educational Liaison mailing list (AMSAT-EDU)
* AMSAT K-12 Educational Liaison mailing list (AMSAT-K12)

A daily digest version is available for each list.

To subscribe, or for more list information, visit the following URL:
http://www.amsat.org/mailman/listinfo/ans

In addition to regular membership, AMSAT-NA offers membership in the President's Club. Members of the President's Club, as sustaining donors to AMSAT Project Funds, will be eligible to receive additional benefits. Application forms are available from the AMSAT-NA Office.

This week's Weekly Satellite Report Editor is James French, W8ISS.

ANS is always dedicated to past ANS editor 'BJ' Arts, WT0N, and to the memory of longtime AMSAT supporters Werner Haas, DJ5KQ, Dennis Kitchen, G0FCL and John Branegan GM4IHJ.

Please send any amateur satellite news or reports to: ans-editor{at}amsat.org
NNNN
/EX

143. Radio Meteor Obs. Bull. September 2012

Newsgroup: rec.radio.amateur.space
Date: 2012-10-06 09:18:26 UTC
From: Chris Steyaert <observations@rmob.org>
Message-ID: <4ktv68hlufus71bhdu26tbt0svvmr3ndp3@4ax.com>
Source record: 243
Cross-posted to: rec.radio.amateur.space,sci.astro.amateur

Radio Meteor Observation Bulletin No. 230 of September 2012 (76 K) is available now as

http://www.rmob.org/rmobtext/rmob1209.txt

More information and the visual presentation of the hourly forward scatter counts can be found on

http://www.rmob.org

Chris

144. ANS-281 AMSAT News Service Weekly Bulletins

Newsgroup: rec.radio.amateur.space
Date: 2012-10-07 01:41:10 UTC
From: JoAnne Maenpaa <k9jkm@comcast.net>
Message-ID: <001c01cda42c$ccb82970$66287c50$@net>
Source record: 244
Cross-posted to: rec.radio.amateur.space,rec.radio.info

AMSAT NEWS SERVICE
ANS-281

ANS is a free, weekly, news and information service of AMSAT North America, The Radio Amateur Satellite Corporation. ANS reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in designing, building, launching and communicating through analog and digital Amateur Radio satellites.

Please send any amateur satellite news or reports to:
ans-editor at amsat.org

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SB SAT @ AMSAT $ANS-281.01
ANS-281 AMSAT News Service Weekly Bulletins

AMSAT News Service Bulletin 281.01
>From AMSAT HQ SILVER SPRING, MD.
October 7, 2012
To All RADIO AMATEURS
BID: $ANS-281.01

Register Today for the 2012 AMSAT Space Symposium in Orlando

This is a reminder that the 2012 AMSAT Space Symposium will be held on Friday, October 26th through Sunday, October 28th at the Holiday Inn Hotel at Orlando-International Airport.

See the AMSAT Web Store to complete your on-line registration:
http://store.amsat.org/catalog/index.php?cPath'

Symposium Registration including Proceedings
o Starting September 24, 2012: $ 50.00

o At the Door: $ 55.00

Downloadable paper registration forms in MS-Word format and
PDF format are available on the 2012 Symposium page:
http://www.amsat.org/amsat-new/symposium/2012/index.php

The Symposium Schedule web page has been updated with links to find
more information about the planned activities. See:
http://www.amsat.org/amsat-new/symposium/2012/SymposiumSchedule.php

[ANS thanks the 2012 Symposium Committee for the above information]

2012 AMSAT Symposium Schedule

To help you plan your trip to Orlando the 2012 Symposium Committee
has posted a high-level schedule of the weekend's events.

Preliminary 2012 Symposium Schedule

Thursday 25 October 2012

AMSAT Board of Directors Meeting 8am - 9pm

Friday 26 October 2012

AMSAT Board of Directors Meeting 8am - Noon
Trips to SkyCraft 9am - Noon
AMSAT Symposium 1pm - 5pm

Saturday 27 October 2012

Symposium 8am - 3pm
AMSAT General Meeting 3:30pm
AMSAT Banquet 6:30pm - 10pm
+ The featured speaker for the AMSAT 2012 Saturday Evening Banquet
will be Dr. Samuel T. Durrance, NASA Astronaut/Payload Specialist
and Professor of Physics and Space Sciences at the Florida Insti-
tute of Technology.

Sunday 28 October 2012

7:30am AMSAT Area Coordinator's Breakfast
Local trip of Interest TBD

Monday 29 October 2012

Special trip to Kennedy Space Center 8am-6pm
The trip will include a round trip bus from the hotel and entrance
to the Space Center. The cost will be about $100. This is a wonderful
experience for those that haven't been and for those that have been
multiple times. We need to get an idea of how many will participate
to select the correct bus. Contact Martha if interested

Watch the AMSAT Symposium Web Pages for the latest information:
http://www.amsat.org/amsat-new/symposium/2012/index.php

[ANS thanks the 2012 Symposium Committee for the above information]

Five CubeSats Deployed From ISS Now on-Orbit - Signals Received

Five cubesats launched on July 21 and loaded aboard the ISS were integrated with the J-SSOD small satellite deployer on the the Japanese Experiment Module, also known as Kibo. They were deployed with the Kibo robotic arm on October 4, 2012. The orbit for these CubeSats will be very close to the orbit of the ISS.

NanoRack posted a photo of the deployment at: pic.twitter.com/wZAX5qZL
(Click on the image to view the full-sized photograph)
SpaceRef posted an article and several more photographs on-line at:
http://spaceref.com/news/viewsr.html?pidB238

+ First Deployment by Astronaut Akihiko Hoshide
o WE-WISH - Telemetry downlink on 437.505 MHz
o RAIKO - non-amateur radio Ku-band beacon

+ Second Deployment by JAXA GS
o TechEdSat - Telemetry downlink on 437.465 MHz.
o NanoRack/F-1 -
> 145.980 MHz: main channel, 1.0W RF output, FM, AFSK 1200bps,
> one telemetry packet every 30 seconds, operates in the dark
> by default (but can be commanded later to operate in sunlight)
> 437.485 MHz: backup channel, 0.2W RF output, FM, PWM CW beacon,
> each beacon transmission lasts about 20 seconds then 60 seconds
> delay, only operates in sunlight

o FITSAT-1
> CW Beacon 437.250 MHz,
> FM Data 437.445 MHz,
> High speed data 5840.00 MHz

FITSAT-1 Heard With Strong Signals

Signal reports from PY5LF, OH3UW, DK3WN, VU3TYG, G6LVB (using a FUN-cube Dongle Pro+ and 7" wire antenna), GW1FKY, F5YG, JE9PEL, JN1GKZ, ST2NH, and others via the amsat-bb list.

FITSAT-1 transmits its beacon frequency 437.250 MHz. This is the same frequency as the PRISM satellite of Tokyo Univ. FITSAT CW will transmit, "HI DE NIWAKA JAPAN" with its telemetry data. To receive a FITSAT-1 QSL card please send your signal report and your postal address to: fitsat1@hotmail.co.jp and also cc to tanaka@fit.ac.jp.
A photo of the QSL card is shown at:
http://www.fit.ac.jp/~tanaka/fitsat.shtml
This web page will also be updated with information about the status of the LED experiment.

HB9FFH has made a telemetry decoder for FITSAT-1, available at:
http://carpcomm.com/satellite/fitsat1

FITSAT students have also developed a similar program for windows:
http://turing.cs.fit.ac.jp/~fitsat/CWFM/FITSAT_CW_Analyzer1.zip

TechEdSat Heard With Weak Signals

Signal reports received from PY5LF, DK3WN, and JE9PEL indicate that TechEdSat was received with weak signals on its 437.465 MHz downlink. Mark Allard, KD6CWM, President of the NASA-Ames Research Center Amateur Radio Club reports their OSCAR/ARISS satellite station, NA6MF, will be supporting TechEdSat as one of the monitoring stations for the TechEdSat Amateur Radio beacon.

TechEdSat transmits a custom beacon packet. Details can be found at: http://www.techedsat.com/. Packets acquired from TechEdSat can also be submitted to the website for decoding by the TechEdSat team. Use the 'Packet Submission' link found at the top of the web page.

WE WISH SSTV Picture Received

PY4ZBZ and JE1CVL received the SSTV picture on 437.505 MHz.
JE9PEL provided a translation of the image that is a sentence of "JQ1ZIJ MEISEI ARC 2012". A photo of the received picture is at:
http://www.ne.jp/asahi/hamradio/je9pel/21005wis.png

A photo of the SSTV picture received by PY4ZBZ is posted at:
http://www.qsl.net/py4zbz/satelite.htm#ww

Viet Nam F-1 Not Heard

Viet Nam's F-1 satellite was scheduled to begin telemetry transmissions 30 minutes after deployment by sending a beacon alternating on its main and backup channels. At press time no signal reports have been received from this satellite.

More information and guide to download F-1 telemetry decoder can be found at http://fspace.edu.vn/?page_id'. Decoded data can be submitted via the telemetry decoder or by sending directly to the ground station: thuvt@fpt.edu.vn. Audio recordings are highly appreciated.

[ANS thanks the CubeSat Teams; Vu Trong Thu, XV9AA; Mark Allard, KD6CWM; and Takushi Tanaka, JA6AVG for the above information]

AO-27 Reported Down

AO-27 user reports this week reported that the satellite was not operational. The end-of-transmit cycle AFSK packet telemetry beacon was reported to become stuck on a single tone. No downlink signal was received from AO-27 on later passes.

The latest AO-27 news is posted on its webpage:
http://www.ao27.org/AO27/index.shtml

In summary, as of October 6 control operators had recovered AO-27 to running on the primary Bootloader and were able to turn on the transmitter for a short time. They continue working on uploading the software.

Mode V/U (J) FM Voice Repeater Frequencies

Uplink: 145.8500 MHz FM
Downlink 436.7950 MHz FM

[ANS thanks James, N3UCC and Michael, N3UC for the above information]

PACIFICON 2012 Will Feature ARISS Contact and Satellite Demo Station

An Amateur Radio on the International Space Station (ARISS) contact has been planned with youth participants at PACIFICON 2012, Santa Clara, CA on 13 October. The event is scheduled to begin at approximately 18:57 UTC or 11:57 PDT. The contact will be a telebridge between NA1SS (the ISS) and IK1SLD (in Italy). The contact should be audible over Europe and the Mediterranean. Interested parties are invited to listen in on the 145.80 MHz downlink. The contact is expected to be conducted in English.

PACIFICON 2012, a premiere wireless event, will be held October 12, 13, and 14, 2012 and will host the 2012 American Radio Relay League (ARRL) National Convention and Exposition.

Over 2,500 amateur radio enthusiasts are expected to attend. The 2012 PACIFICON Youth program includes a "Youth Lounge" and forums throughout the convention weekend; the Youth program is positioned in the middle of the exhibit hall and provides STEM educational activities which include hands on radio operation, electronics kit building orbital mathematics, CubeSat satellite design, and popular radio transmitter T-Hunts.

A scheduled ARISS radio contact and a presentation by NASA astronaut, Dr. Lee M. Morin KF5DDB, will highlight the Youth Lounge activities. Free admission is provided to Girl Scouts, Boy Scouts, Camp Fire Girls, Brownie, Cub Scouts, Explorer Scouts, 4-H members, and to all youth 17 and under. The Youth Forum will include young Amateur radio enthusiasts Andrea Hartlege KG4IUM, former ARRL South Eastern Division Vice Director and Katie Stensrud K7KTI, a young Amateur from Nevada, and many amateur radio educational resources from the ARRL & AMSAT.

PACIFICON 2012 will include numerous amateur radio operations including the convention FCC Special Event Station W6P; the ARRL's W1AW/6; additional stations will be operated remotely from the convention site as well as one portable satellite earth station and one fully automated satellite earth demonstration station. PACIFICON 2012 will offer

over 120 educational forums and programs, including a forum hosted by AMSAT on Amateur Satellite Communications, approximately sixteen indoor on-the-air exhibits, and eight outdoor on-the-air exhibits will be hosted.

For more information, please review the PACIFICON 2012 web site at: http://www.pacificon.org/ or, contact Joe Spier, Associate Director for Education, AMSAT-NA, at k6wao@amsat.org

[ANS thanks Joe Spier, K6WAO and Mark Hammond, N8MH for the above information]

ARISS Successful School Contacts

Turkey

Izmir SEV Primary School, located in Turkey, had an Amateur Radio on the International Space Station (ARISS) contact on October 5 via telebridge station K6DUE in Greenbelt, Maryland.

The school participates in the Partner School Science Program, which is a program under Global Friendship Through Space Education, a California-based non-profit organization that promotes friendship among young people from different countries and cultures through the study of space-related science and technology. Students communicate about space-related projects via e-mail, collaborate on research on NASA's distance-learning Web site, and videoconference between NASA and partner schools. First Lego League Robotic Teams and Destination Imagination Teams have been a part of school activities annually since 2005. Invitations to attend this event have been extended to several VIPs including the minister of transportation, the president of the board of education, the director of education, the mayor of Izmir and the governor of Izmir.

Maryland

An Amateur Radio on the International Space Station (ARISS) contact was held between students at the Waxter Young Women's Academy in Laurel, Maryland and Akihiko Hoshide, KE5DNI aboard the ISS on September 24. Telebridge station LU8YY in Argentina handled the radio connection. The girls were able to have all 13 of their questions answered with enough time left to thank Hoshide for participating. Phone lines throughout the center were made available so that other students could listen in as well. The ARISS contact was part of a comprehensive education plan used to interest students in Science, Technology, Engineering and Math (STEM).

Nova Scotia

On September 26, Sacred Heart School of Halifax in Nova Scotia, Canada participated in an Amateur Radio on the International Space

Station (ARISS) contact with on-orbit astronaut Sunita Williams, KD5PLB. Telebridge station LU8YY in Argentina connected with Williams, but the international phone line, which was to connect Argentina to Halifax, went down and could not be brought up until after the ISS had passed overhead. Williams agreed to try the contact again on the next pass. Ninety minutes later, the audience of 250 got what they had been waiting for - a successful contact! The students got in 17 questions, and one student was wished a Happy Birthday by the ISS commander.

Video of LaFayette Middle School ISS contact

When Jody Carter was 8 years old, his father tried unsuccessfully to contact the space shuttle via ham radio. Thirty years later, the second time was the charm. The Times Free Press reports that just after 11 a.m. Friday, Sept. 21, Carter, who's now a math and science teacher at LaFayette Middle School, radioed Sunita "Suni" Williams KD5PLB, commander of the International Space Station. Read the full story and watch the video at:
http://tinyurl.com/Lafayette-ISS

[ANS thanks Carol Jackson, KB3LKI for the above information]

US Naval Academy PSAT Features PSK-31 and APRS Transponders

The US Naval Academy in Annapolis, Maryland is developing a new student satellite, ParkinsonSAT, or PSAT which is a two way APRS communications transponder for relaying remote telemetry, sensor and user data from remote environmental experiments or other data sources back to experimenters via a global network of internet linked volunteer ground stations. The data transponder also includes all telemetry, command and control for a complete cubesat.

PSAT is a 1.5 unit cubesat so that two PSATs can be launched from the same P-Pod launcher. The design uses four deployable solar arrays which are stowed down the sides. Half of the 1.5 unit PSAT is available for auxiliary payloads or experiments. Details of the PSAT project are available on-line at: http://www.aprs.org/psat.html

PSAT will fly a PSK-31 transponder with a 10 meter uplink and a 2M FM downlink. PSK-31 will allow up to 30 simultaneous users:
http://aprs.org/psat/PSK31-DESIGN-NOTES.html

Bob Bruninga, WB4APR noted, "PSK-31 is the ideal AMSAT FM transponder for a cubesat. With an FM downlink, anyone can receive it with an HT and a laptop with PSK-31 software. And anyone with a 10m PSK-31 uplink can transmit to it. And since the downlink is FM, everyone tuned in SEES THE SAME WATERFALL and sees EXACTLY where they are in the downlink. A small uplink doppler adjustment can keep each station locked to his chosen channel in the passband. Everyone can talk to everyone if they want, or go one-on-one too."

The SSB uplink and UHF FM downlink transponder fits on a smaller than 3"x3" circuit board being developed by Mirek Kasal at Brno University. Launch of PSAT is planned in 2015. The 3"x3" transponder may also be adaptable for other missions.

[ANS thanks Bob Bruninga, WB4APR for the above information]

Cuba Satellite Group Launches Satellite Net in Havana

Raydel Abreu Espinet, CM2ESP reported this week that the Cuban Satellite Group named Grupo de Radioaficionados para Operaciones Satelitales (GROS) has started a VHF FM Net devoted entirely to the Amateur Radio Satellites on 145.550 MHz. CM2ESP is the Net Control Station. The net will be on the air every Friday from 19:00 to 20:00 local time in Havana.

The net is in range for the Havana Province (capital of Cuba), with coverage also to the surrounding provinces of Mayabeque and Artemisa. The net is divided in three sections: News; A Technical Topic; and Question and Answer Session.

The Cuban Satellite Group named Grupo de Radioaficionados para Operaciones Satelitales (GROS) will continue promoting and creating new activities to increase the presence of Cuban Amateur Radio Stations on the satellites and the activation of new grids. Several demonstrations and workshops are currently being scheduled.

[ANS thanks GROS Coordinator Raydel Abreu Espinet, CM2ESP for the above information]

FUNcube Dongle Filtered Preamp Available at AMSAT-UK On-line Store

David Bowman, G0MRF, a member of the AMSAT-UK FUNcube team, has designed and manufactured a 2m Filtered Preamp for use with the FUNcube dongle or any 2m receiver. This is now available for purchase through the AMSAT-UK web shop.

Two versions of the preamp are available. The first is a kit form including all the components required to build the preamp yourself. The second is a prebuilt version. The stock on the prebuilt version is very limited. Both kit and prebuilt versions are on sale for £47 plus postage and packing.

More information is available on the AMSAT-UK web site. Look under the "Projects" section at http://www.uk.amsat.org to read the construction notes as well as the measurement report carried out on the preamp.

The AMSAT-UK web shop is at http://shop.amsat.org.uk and the premps appear under the "Hardware" category in the catalogue.

A video demonstration of the FUNcube Dongle Pro+ LF/MF/HF/VHF/UHF
Software Defined Radio is posted at: http://www.amsat-uk.org/

[ANS thanks Ciaran Morgan, M0XTD of AMSAT-UK for the above information]

Satellite Shorts From All Over

+ AMSAT Director Contests and Awards, Bruce Paige, KK5DO says a
correction needs to be made to the AMSAT Field Day Results he
sent last week:

Rank Call Class Score
---- ---- ----- -----
7 WC9C 4E 15 should be corrected to:
7 WC5C 4F 15
An article, photos, and the results will be published in an up-
coming edition of the AMSAT Journal.

+ The traditional e-mail format of the AMSAT News Service Bulletins
is being expanded so that news of Amateur Radio in Space is more
accessible on mobile devices:
AMSAT News Service Archives: http://amsat.org/pipermail/ans/
AMSAT-NA on Facebook: http://www.facebook.com/groups/7828379515/
ANS Bulletins will be posted at: http://www.hamradiotoday.com/
(HamRadioToday is an excellent forum of amateur radio topics.)
ANS Bulletins will be posted at: http://www.qrz.com/
The bulletins will continue to be sent via the ANS List and the
AMSAT-BB in e-mail format.

+ Watch a video by the Minute Physics folks explaining why the sky
is dark at night:
http://www.youtube.com/watch?feature&#65533;ayer_embedded&v&#65533;J4M7tyLRE

+ Astronomy Now and Spaceflight Now have created an interactive
iPad guide to the Curiosity rover mission:
http://tinyurl.com/8peyrz8 (itunes.apple.com)

+ Canadian Special Event Station will be signing CG3X until October 28
to commemorate the 50th anniversary of the first Canadian satellite
"Alouette". QSL via VE3JPP. (DX Newsletter DXNL 1800 - Oct 3, 2012)

+ Hams like science so get a peek at the eXtreme Deep Field, or XDF,
a photo was assembled by combining 10 years of NASA Hubble Space
Telescope photographs taken of a patch of sky at the center of the
original Hubble Ultra Deep Field. That's right, a 10 year time ex-
posure: http://tinyurl.com/Hubble-XDF (SpaceDaily.com) Also see
the article at: http://spaceref.com/news/viewpr.html?pid8692

+ Cool, new postage stamps for your QSL activities featuring Ameri-
ca's diverse landscapes on photos taken from ultra lights to sat-
ellites are on the Earthscapes stamps. Details of the stamp plus
where to find first-day issues can be found in the article at:
http://spaceref.com/news/viewpr.html?pid8738

+ Doug, VK3UM reports updates have been made for his EME Calculation software. New versions are available from Doug's website at http://www.vk3um.com for:
o EMECalc Ver 8.07 (28th Sep 12)
o EME Planner Ver 1.71. (21st Sep 12)
o EMR Calculator Ver 7.03 (22nd Sep 12)

+ Flex Radio has posted a guide to using SATPC32 with the Flex 5000 VU5K transverter. Along with the SATPC32-specific details, there is information of use to satellite operators in general. See:
http://support.flex-radio.com/Downloads.aspx?id@4
(via Alan, WA4SCA)

+ The Houston AMSAT Net meets every Wednesday at 0100z (this is Tuesday evening in North America) on Echolink - Conference *AMSAT* . The MP3 audio is also streamed http://www.amsatnet.com. After the net a Podcast is available at:
http://www.amsatnet.com/podcast.xml or iTunes

+ The next Hudson Valley Satcom net dates are Thursday, October 11 and October 25 at 8 PM EDT (UTC-4 UTC) on the 146.97 MHz MBARC Repeater (PL 100). An echolink connection is available on the N2EYH-L node. More information at: http://www.hvsatcom.org.
(Stu, WA2BSS)

+ The 2012 Great World Wide Star Count is a citizen science project running between October 5 to October 19. You are invited to make night star observations from your QTH and report your results online. To learn more of this project and to participate see:
http://www.windows2universe.org/citizen_science/starcount/index.html

[ANS thanks everyone for the above information]

/EX

In addition to regular membership, AMSAT offers membership in the President's Club. Members of the President's Club, as sustaining donors to AMSAT Project Funds, will be eligible to receive additional benefits. Application forms are available from the AMSAT Office.

Primary and secondary school students are eligible for membership at one-half the standard yearly rate. Post-secondary school students enrolled in at least half time status shall be eligible for the student rate for a maximum of 6 post-secondary years in this status. Contact Martha at the AMSAT Office for additional student membership information. And with that, please keep in mind that the light from the sun, arriving now is 30,000 years old. The energy in the sunlight we see today started out in the core of the Sun 30,000 years ago. It spent most of this time passing through the dense atoms that make the core and just 8 minutes to reach us once it had left the Sun.

73,
This week's ANS Editor,
JoAnne Maenpaa, K9JKM

145. Weekly Highlights of Solar and Geomagnetic Activity, 01 - 07 October 2012

Newsgroup: rec.radio.amateur.space
Date: 2012-10-08 15:30:09 UTC
From: SWPC.Webmaster@noaa.gov
Message-ID: <20121008153001.E29FB33C9A@panix2.panix.com>
Source record: 245
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.dx,rec.radio.amateur.space,rec.radio.shortwave,rec.radio.info

```
:Product: Weekly Highlights and Forecasts
:Issued: 2012 Oct 08 0351 UTC
# Prepared by the US Dept. of Commerce, NOAA, Space Weather Prediction Center
# Product description and SWPC contact on the Web
# http://www.swpc.noaa.gov/weekly.html
#
# Weekly Highlights and Forecasts
#
Highlights of Solar and Geomagnetic Activity
01 - 07 October 2012

Solar activity was low. The largest flares of the week, both C4s,
were attributed to Region 1575 (N08, L=181, class/area=Eko/320 on 22
Sep) at 01/0147Z and again at 01/1313Z as it rotated beyond the west
limb. The remainder of the week was characterized by x-ray flares in
the mid-to-upper B class and low C class range. An exceptionally
long duration B7 flare (7hr 29min) from Region 1584 (S23, L=70,
class/area=Dso/40 on 01 Oct) peaked at 05/0730Z and was associated
with an earth-directed CME. The CME was observed in SOHO/LASCO C3
imagery at 05/0730Z and had an estimated speed of approximately 590
km/s. It was expected to reach earth late on 08 October. Another CME
was observed later in the week when a 30 degree long filament,
centered near S65W15, erupted on 07 October. SDO imagery first
observed movement along the filament channel at approximately
06/2000Z with ejecta visible off the SW limb at about 07/0700Z.
LASCO C2 imagery observed a partial-halo CME lifting off the SW limb
first visible at 07/0812Z. Subsequent WSA-Enlil model output
indicated a possible weak, earth-directed component of this CME.

No proton events were observed at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit was at
normal levels throughout the week.

Geomagnetic field activity began the week at severe storm levels
after an earth-directed CME from 27 September arrived late on 30
September. Severe storm levels were observed for the 01/00-03Z
synoptic period, decreasing in the subsequent periods to major storm
levels for 01/03-06Z, and then active levels for the 01/06-09Z
period. The remainder of the week saw quiet geomagnetic conditions
with the exception of the first synoptic period on 03 October which
was unsettled.

Forecast of Solar and Geomagnetic Activity
08 October - 03 November 2012
```

Solar activity is expected to be at generally low levels with a chance for an M-class event, particularly during 12-26 October when Old Region 1583 (N12, L=187, class/area=Dso/90) returns.

No proton events are expected at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit is expected to be at high levels on 11-13 October as a result of a coronal hole high speed stream. Flux for the remainder of the forecast period is expected to be at background levels.

Geomagnetic field activity is expected to begin at quiet to unsettled levels, increasing to active to minor storm levels late on 08 October with the arrival of the earth-directed CME from 05 October. Minor storm levels are expected to continue through 09 October. Then geomagentic field activity is expected to decrease to unsettled to active levels for 10-11 October under the influence of a coronal hole high speed stream. Quiet conditions return on 12-14 October before subsequent coronal hole high speed streams bring unsettled to active conditions on 15-17 October.

146. ANS-288 AMSAT News Service Weekly Bulletins

Newsgroup: rec.radio.amateur.space
Date: 2012-10-14 14:14:44 UTC
From: JoAnne Maenpaa <k9jkm@comcast.net>
Message-ID: <001701cdaa16$3e40f7e0$bac2e7a0$@net>
Source record: 246
Cross-posted to: rec.radio.amateur.space,rec.radio.info

AMSAT NEWS SERVICE
ANS-288

ANS is a free, weekly, news and information service of AMSAT North America, The Radio Amateur Satellite Corporation. ANS reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in designing, building, launching and communicating through analog and digital Amateur Radio satellites.

Please send any amateur satellite news or reports to:
ans-editor@amsat.org

In this edition:
* 2012 AMSAT Space Symposium in Orlando Just Weeks Away
* Symposium Trip to the Orlando Science Center - Sunday, 28 October 2012
* National Scouting Museum to Celebrate JOTA With ARISS Contact
* Interorbital Offers Low Cost Launch to LEO for 40kg of CubeSats
* Viet Nam F-1 Satellite Team Requests Hams Continue to Listen
* RSGB, AMSAT-UK, and BATC Publish Joint Response to British OFCOM
* ARISS Status - 9 October 2012

SB SAT @ AMSAT $ANS-288.01
ANS-288 AMSAT News Service Weekly Bulletins

AMSAT News Service Bulletin 288.01
From AMSAT HQ SILVER SPRING, MD.
October 14, 2012
To All RADIO AMATEURS
BID: $ANS-288.01

2012 AMSAT Space Symposium in Orlando Just Weeks Away

This is a reminder that the 2012 AMSAT Space Symposium will be held on Friday, October 26th through Sunday, October 28th at the Holiday Inn Hotel at Orlando-International Airport.

See the AMSAT Web Store to complete your on-line registration:
http://store.amsat.org/catalog/index.php?cPath'

Symposium Registration including Proceedings
o Starting September 24, 2012: $ 50.00
o At the Door: $ 55.00

Downloadable paper registration forms in MS-Word format and PDF format are available on the 2012 Symposium page:
http://www.amsat.org/amsat-new/symposium/2012/index.php

The Symposium Schedule web page has been updated with links to find more information about the planned activities. See: http://www.amsat.org/amsat-new/symposium/2012/SymposiumSchedule.php

IMPORTANT message for all those planning to attend the special tour to the Orlando Science Museum during the AMSAT Space Symposium in Orlando, FL on Sunday, Oct. 28, 2012.

For those planning to attend the special Star Wars Exhibit, you must contact Martha at AMSAT, to pay for your ticket in advance. Martha can be reached at 888-322-6728 or 301-589-6062).This must be done no later than Thursday, October 17 to reserve your spot for the tour.

Please note that the following trip schedule has been updated from the current schedule posted at www.amsat.org.

[ANS thanks the 2012 Symposium Committee for the above information]

Symposium Trip to the Orlando Science Center - Sunday, 28 October 2012

Trip schedule:

Leave the hotel at 9:00am (transportation is provided)
Arrive at OSC at 9:45am (non-members parking: $5/vehicle)

Special backstage tour at 10:00am (should last 45 min. - our AMSAT liaison
will meet us in lobby)

>From 10:45am until 11:30am - visit the various Center exhibits

Those who pre-paid for the Star Wars Exhibit enter the exhibit as a group at
11:30am (tkts cost $27/person - PRE-PAYMENT IS REQUIRED - SEE NOTE BELOW

View Exhibit from 11:30am until 1:00pm

Lunch at local restaurant from 1:15pm to 2:15pm

Leave restaurant at 2:15pm

Arrive back by 3:00pm

NOTE:

Star Wars Exhibit:
http://www.osc.org/index.php?option=com_content&view=category&layout=blog&id=7&Itemid=1

The Star Wars Exhibit is a limited engagement feature and is expected to draw large crowds. In order to guarantee our visit stays on schedule, the Center has arranged for AMSAT to enter the exhibit as a single group at 11:30am.

If you choose to visit this exhibit, you MUST contact Martha at AMSAT, and pay for your ticket in advance. Martha can be reached at 888-322-6728 or 301-589-6062). This must be done no later than Thursday, October 17 to reserve your spot for the tour. Otherwise, you will not be guaranteed a spot in the 11:30 tour with the rest of the members. Total cost per person will be $27.00. Please note that this fee also covers general admission to OSC and all exhibits, including the IMAX theater. When you arrive the tickets will be with your tour guide.

Those that choose not to attend the Star Wars Exhibit may have the opportunity of attending a feature in the IMAX Theater, providing the show times coincide with our time schedule during the visit. Admission to the IMAX Theater is covered under your initial admission fee. Admission fee to OSC will be $17.00 for those not attending the Star Wars Exhibit and will be paid at the door.

For those managing afternoon plane departures, transportation back to the hotel will be provided by AMSAT volunteers at 11:30am, but only if needed.

[ANS thanks the 2012 Symposium Committee for the above information]

National Scouting Museum to Celebrate JOTA With ARISS Contact

The weekend of October 20-21, 2012 is Scouting's 55th Jamboree-on-the-Air (JOTA). JOTA is a World Scouting event that bridges Scouts all over the world via amateur radio.

The official hours are from Saturday at 00:00 hours local time to Sunday 24:00. JOTA is not a contest but idea is to contact as many stations as possible during the weekend. So you will hear Scouting stations calling "CQ Jamboree," or answering the calls. All amateur radio operators are invited to participate. An even better idea is to invite Scouts to your station or club to take part in JOTA.

JOTA will be the main event at the National Scouting Museum. Numerous amateur radio stations will be set up throughout the Museum, allowing for both local and global communication by various modes.

There will also be many other fun and educational activities; such as hidden transmitter hunts, electronic project assembly, solar telescopes, demonstrations of satellite communications, and much more throughout the day

The JOTA at the National Scouting Museum, Irving, Texas ARISS contact time has now been confirmed. Contact will begin at 18:30:30Z via telebridge station VK6MJ in Australia. If you cannot join us at the Museum, you are invited to listen in to the contact via the 146.88 Dallas Amateur Radio Club repeater, via the Echolink "AMSAT" conference bridge or on UStream via URL: http://www.ustream.tv/channel/dallasjota.

Lets light up the birds this JOTA weekend with Scout to Scout contacts. Find a club or scouting organization near you that is running a JOTA station and ask them if you can participate. Many of them have never experienced a satellite radio contact and you will hook 'em.

For a list of BSA registered JOTA stations, please check out the growing list at http://www.scouting.org/jota/registered_stations.aspx and find one in your area. You can download the full spreadsheet there as well which has contact information for the local organizer who have registered their events. Outside the US contact your local Scouting agency and find out how you can participate.

JOTA is a great way to get out of the ham shack and demonstrate the thrill of Amateur Radio Satellites to an eager audience.

Boy Scouts of America JOTA Page:
http://www.scouting.org/jota.aspx

World Scouting Organization JOTA Page:
http://www.scout.org/en/information_events/events/jota

ARRL JOTA Page:
http://www.arrl.org/jamboree-on-the-air-jota

National Scouting Museum JOTA Page:
http://bsamuseum.org/Programs/JOTA%202012.aspx

[ANS thanks the Boy Scouts of America, the National Museum of Scouting, the World Scouting Organization, and the ARRL for the above information]

Interorbital Offers Low Cost Launch to LEO for 40kg of CubeSats

The October, 2012 issue of the on-line SatMagazine published an article discussing Interorbital Systems' preparations to launch their Neptune 5 and Neptune 7 rockets. Interorbital, based in Mojave, California, develops and manufactures low-cost, state-of-the-art orbital launch vehicles and satellites for private, commercial, governmental, academic, arts, and military applications.

They also have available the $8,000 Personal Satellite Kit and Launch Program for universities, private citizens, military, and government entities throughout the world to develop TubeSats. There are details of the TubeSat and CubeSat kits on their web page. See:
http://www.interorbital.com/

Two flights of the Neptune 5 launch system are planned to accommodate the 9 CubeSats and 23 TubeSats. Interorbital's Neptune 7 launch has already booked 10 CubeSats and 10 TubeSats to be delivered to low Earth orbit.

The Neptune 7 capable of lifting approximately 40kg to LEO - or 30 small TubeSats and CubeSats per launch. The first launch is sold

out and the second is rapidly closing.

Read all of Interorbital's Article, "A Builder's Guide To Inexpensive Space Access" By Randa Relich Milliron, CEO, Interorbital Systems on page 60 of the October, 2012 SatMagazine which can be downloaded for free at: http://www.satmagazine.com/2012/SM_Oct2012.pdf

Also in this issue of SatMagazine are articles about the Aeneas Cube-Sat, Satellite Networks For Education, and the Firefly CubeSat.

AMSAT-UK has links to SatMagazine at: http://www.uk.amsat.org/?p009

[ANS thanks AMSAT-UK, SatMagazine, and Interorbital Systems for the above information]

Viet Nam F-1 Satellite Team Requests Hams Continue to Listen

An article published on the AMSAT-UK web reports that the FSpace team of young engineers and students at the FPT University in Viet Nam are requesting Amateur Radio operators continue to listen for their F-1 CubeSat, callsign XV1VN which was deployed from the International Space Station on October 4 but not heard on Earth.

Team Lead, Thu Trong Vu XV9AA provided this update on October 7, "So far the team has received several mixed reports about F-1 status, there is no definite conclusion yet. We will continue to collect in-formation and analyze the situation, this afternoon we will hold a team meeting to discuss different situations that may happen with the little satellite up there. Please continue to help us listening for F-1 on 437.485 in daylight and 145.980 in the dark, thank you!"

F-1 was expected to begin transmitting beacon alternatively on its main and backup channels 30 minutes after deployment.

F-1 frequencies:

+ 145.980 MHz: main channel, 1.0W RF output, FM, AFSK 1200bps, one telemetry packet every 30 seconds, operates in the dark by default (but can be commanded later to operate in sunlight as well)

+ 437.485 MHz: backup channel, 0.2W RF output, FM, PWM CW beacon, each beacon transmission lasts about 20 seconds then 60 seconds delay, only operates in sunlight

More information and guide to download F-1 telemetry decoder can be found at http://fspace.edu.vn/?page_id'. Decoded data can be sub-mitted to us via the telemetry decoder or by sending directly to: thuvt@fpt.edu.vn. Audio recordings are highly appreciated.

Read the full article at: http://www.uk.amsat.org/?p480

[ANS thanks AMSAT-UK and the F-1 CubeSat Team for the above information]

RSGB, AMSAT-UK, and BATC Publish Joint Response to British OFCOM

RSGB, AMSAT-UK, and BATC have provided a joint Amateur Radio response to a July, 2012 Ofcom consultation document calling for input regarding, "VHF Spectrum Release in the range 143 MHz to 156 MHz".

The response notes the, "unprecedented opportunity for VHF innovation and growth based on an allocation to amateur radio at 146 - 148 MHz within the UK for digital TV, audio, and other evolving spectrum efficient data applications."

Also included in the response is a call to, "Provide for the increasing use of the existing 144-146 MHz allocation for amateur satellite activities by the CubeSat and similar spacecraft being developed by UK University student teams in collaboration with radio amateurs.

It was noted that spectrum allocation at 146 - 148 MHz would allow for, "Use of equipment harmonised for amateur use in ITU Regions 2 and 3 where 146-148 MHz is already a ITU Primary allocation to the Amateur service."

The Amateur Radio response also notes this allocation to the Amateur service provides, "Room for highly innovative infrastructure-free narrowband DATV and other new applications that we have not been able to deploy in restricted secondary bands such as 70 MHz or 423 MHz, 1296 MHz.

The full document is available on-line at the RSGB Web:
http://tinyurl.com/Amateur-Joint-Response

[ANS thanks AMSAT-UK, RSGB, and BATC for the above information]

ARISS Status - 9 October 2012

1. Izmir, Turkey School Hosts ARISS Contact

On Friday, October 5, students from Izmir SEV Primary School in Turkey participated in an Amateur Radio on the International Space Station (ARISS) contact with astronaut Sunita Williams, KD5PLB via station K6DUE in Greenbelt, Maryland. Williams answered all 20 questions posed to her during the event which drew an audience of over 800 students and was heard all over Turkey. The contact highlighted a science curriculum which included other NASA activities such as First Lego League Robotic Teams and Destination Imagination Teams.

2. Sunita Williams Chats with Malaysian Students

Sekolah Kebangsaan students in Putrajaya, Malaysia spoke with Sunita Williams, KD5PLB aboard the ISS through an Amateur Radio on the International Space Station (ARISS) contact on Sunday, October 7. The school was invited to participate in the contact by the National Space Agency Satellite Ground Station, 9M2RPN, in conjunction with

the "Prime Minister's National Space Challenge Trophy 2012," an annual event since 2007 when the Malaysian astronaut, Dr. Sheikh Muszaphar Shukor, flew to the ISS.

3. ARISS Educator Interviewed

Gladys Mu&#65533;oz, a teacher at the Marcelino Canino Canino Middle School in Puerto Rico, was interviewed for a blog by Mr. Anthony Salcito, vice president for education Microsoft Worldwide Enterprises. This took place during her stay in Lima, Peru for Microsoft's Latin America Forum for Innovative Education where she presented a summary of some of her school's aerospace education projects. The school participated in its own ARISS contact on September 12, 2012. See: http://www.youtube.com/watch?v&#65533;e3Vzn35-Y&list&#65533;G_FV4WjnZqtm6sux2g069Q&index&#65533;feature&#65533;pp_video

4. Astronaut Training Status

Luca Parmitano, KF5KDP has been scheduled for a preflight session on October 17. He is slated to fly with the Expedition 36 crew in May 2013.

[ANS thanks Carol, KB3LKI, for the above information]

/EX

In addition to regular membership, AMSAT offers membership in the President's Club. Members of the President's Club, as sustaining donors to AMSAT Project Funds, will be eligible to receive additional benefits. Application forms are available from the AMSAT Office.

Primary and secondary school students are eligible for membership at one-half the standard yearly rate. Post-secondary school students enrolled in at least half time status shall be eligible for the student rate for a maximum of 6 post-secondary years in this status. Contact Martha at the AMSAT Office for additional student membership information.

73,
This week's ANS Editor,
Lee McLamb, KU4OS
ku4os at amsat dot org

147. Crossposting Permitted to rec.radio.amateur.moderated

Newsgroup: rec.radio.amateur.space
Date: 2012-10-15 06:00:03 UTC
From: rram@panix.com
Message-ID: <radio/ham-radio/moderated/crossposting-1-1350280801@panix.com>
Source record: 247
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space,rec.radio.info

```
Posted-By: auto-faq 3.3.2 beta (PGPMoose V2.0, Perl 5.005)
Archive-name: radio/ham-radio/moderated/crossposting
Revision: 1.2 2011/11/02 04:08:53
Posting-Frequency: posted twice monthly
URL: http://www.panix.com/~rram/usenet/rram/index.html

Changes followed by "|".

After a 30-day public discussion and feedback period to gauge reader
opinions in March of 2009:

http://groups.google.com/group/rec.radio.amateur.moderated/browse_thread/thread/d7d337db35
f23326

the rec.radio.amateur.moderated Moderation Team had decided to consider |
amending its charter, and permit limited simultaneous crossposting to
rec.radio.amateur.moderated and one other unmoderated
amateur-radio-related discussion newsgroup. After a successful trial |
period (90 days, through early July 2009), we decided to adopt this |
change permanently. |

Approved rec.radio.amateur.* newsgroups are those that are currently
listed in the latest version of the "List of Big Eight Newsgroups" which
is crossposted monthly to news.announce.newgroups, news.groups, and
news.lists.misc.

Approved alt.radio.amateur.* and alt.ham-radio.* newsgroups are those
that have been created consistent with the suggestions in "So You Want
to Create an Alt Newsgroup" at:

http://www.faqs.org/faqs/alt-creation-guide/

Approved regional hierarchy newsgroups are those that contain either
"radio.amateur" or "ham-radio" in their names, including
uk.radio.amateur and aus.radio.amateur.misc.

We will make every reasonable effort to keep our list of approved
newsgroups up-to-date. In case we have overlooked any, and a submission
is rejected in error as a result, the rejected submitter can E-mail us
at our administrative contact address (in the signature at the bottom of
this article, and the default Reply-To for the rejection message)
requesting that it be added, and that the article be approved. We may
still choose to reject articles crossposted to any alt.* newsgroup with
an inappropriate name, including obscene language, embedded
name-calling, or encouragement of unlawful conduct.
```

Please direct any comments, questions, or criticisms to
rec-radio-amateur-moderated-request@panix.com.

148. Weekly Highlights of Solar and Geomagnetic Activity, 08 - 14 October 2012

Newsgroup: rec.radio.amateur.space
Date: 2012-10-15 15:30:08 UTC
From: SWPC.Webmaster@noaa.gov
Message-ID: <20121015153002.58B1D33C99@panix2.panix.com>
Source record: 248
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.dx,rec.radio.amateur.space,rec.radio.shortwave,rec.radio.info

:Product: Weekly Highlights and Forecasts
:Issued: 2012 Oct 15 1356 UTC
Prepared by the US Dept. of Commerce, NOAA, Space Weather Prediction Center
Product description and SWPC contact on the Web
http://www.swpc.noaa.gov/weekly.html
#
Weekly Highlights and Forecasts
#
Highlights of Solar and Geomagnetic Activity
08 - 14 October 2012

Solar activity was moderate. Three low level M-class x-ray flares occurred in the first three days of the week. At 08/1117 UTC, an M2 was observed off the east limb. This was followed by two M1 flares from the same vicinity on 09/2331 UTC and 10/0504 UTC. The remainder of the week was characterized by C-class activity, primarily from Region 1589 (N13, L=266, class/area=Dkc/280 on 12 October). This region was first numbered on 09 October as it rotated into view as a Cao/B type group. It grew to its maximum area and produced the largest C-class flare of the week, a C9/1f on 12/0820 UTC, in addition to three other C1 flares. Magnetic complexity increased as the region became an Ekc/BGD on 13 October while it's areal extent began to decrease. By the 14th, the area had diminished to 240 millionths and the region was classified as an Eac/BG. The week ended with five regions on the visible solar disk with 1589 remaining the largest among them. Region 1591 (N07, L=230, class/area Dsi/220 on 14 October) was numbered on the 12th. By the 14th, it had become the most productive, responsible for five of the six C-class events that day, the largest of which was a C3 at 14/2159 UTC. There were no Earth-directed CMEs during the period.

No proton events were observed at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit was at low levels on 08 October, then reached high levels every day for the remainder of the week.

Geomagnetic field activity reached major storm levels on the 8th and 9th of October with the arrival of an Earth-directed CME that occured on 05 October. An interplanetary shock was observed at the ACE spacecraft at 08/0445 UTC. A sudden impulse of 21 nT at the Boulder magnetometer followed at 08/0515 UTC. By 08/0556 UTC the Kp index had reached active levels. Minor then major storm levels were subsequently observed at 08/0718 UTC and 08/0834 UTC respectively.

The major storm conditions persisted through 08/1200 UTC, after which conditions returned to mostly active levels. Major storms were again observed during the first two synoptic periods on 09 October, followed by a minor storm period and an active period. Late on the 9th, a coronal hole high speed stream became geoeffective bringing geomagnetic activity to minor storm level for the final period of the day. Solar wind speed at the ACE spacecraft rose from about 380 km/s to near 560 km/s during the latter half of the day. The geomagnetic field activity then declined and, with the exception of one active period on the 12th, remained at quiet to unsettled levels. By the 13th, another coronal hole high speed stream became geoeffective. It was preceded by a corotating interaction region and a solar sector boundary change. This led to active conditions by 13/0450 UTC and minor storm conditons by 13/0819 UTC. Minor storm levels persisted until 13/2100 UTC before briefly decreasing to unsettled levels for the final period of the 13th. The 14th began with minor storm conditions, after which activity ranged from quiet to active levels.

Forecast of Solar and Geomagnetic Activity
15 October - 10 November 2012

Solar activity is expected to be at low levels with a slight chance for moderate activity through 21 October when Region 1589 rotates around the west limb. Generally low levels of activity are then expected to persist through 03 November, after which there is a slight chance for moderate activity as old Region 1589 returns.

No proton events are expected at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit is expected to be at high levels from 13 October through 18 October and again from 05-10 November. Recurrent coronal hole high speed streams are responsible for both periods of high flux.

Geomagnetic field activity is expected to be at quiet levels for the majority of the period. The two exceptions are 15-19 October and 08-10 November when recurrent coronal hole high speed streams are expected to bring active levels with a slight chance for minor storm levels.

149. WSR-289 AMSAT Weekly Satellite Report

Newsgroup: rec.radio.amateur.space
Date: 2012-10-19 02:06:56 UTC
From: JoAnne Maenpaa <k9jkm@comcast.net>
Message-ID: <006701cdad9d$ad2164d0$07642e70$@net>
Source record: 249
Cross-posted to: rec.radio.amateur.space,rec.radio.info

```
This report is organized into three (3) parts.
Part 1 (S1) - operational analog amateur satellites
Part 2 (S2) - operational digital amateur satellites
Part 3 (S3) - non - operational satellites

SB SAT @ AMSAT W8ISS $WSR-289.S1
WSR 289 Part 1 10/15/2012

AMSAT NEWS SERVICE BULLETIN 289.S1
FROM AMSAT HQ SILVER SPRING, MD, October 15, 2012
TO ALL RADIO AMATEURS
BID: $WSR-289.S1

PW-Sat
Catalog Number: 38083 (?)
Launch Date: February 13, 2012 1000z
Launch Site: Kourou, French Guiana

Status: On Orbit

Uplink: 435.020 MHz FM
Downlink: 145.900 MHz DSB

Beacon:

Callsign:

URL:

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=132
[10012012]
=====
DO-64 Delfi-C3
Catalog number: 32789
Launch Date: April 28, 2008 0354z
Launch site: Satish Dhawan Space Centre, India

Status: Operational
Current Mode: Science Mode - Beacon ONLY

Telemetry: 145.870 MHz

Downlink: 145.880 to 145.920 MHz
Uplink: 435.530 to 435.570 MHz

Delfi-C3 web page: http://www.delfic3.nl/
```

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=68
[02092011]
=====
VO-52 HAMSAT
Catalog number: 28650
Launch Date: May 05, 2005 0444z
Launch site: Satish Dhawan Space Centre, India

Status: Operational
Current Mode: U/v - Dutch Transponder

Frequencies:
Indian Transponder:
Uplink: 435.220 to 435.280 MHz LSB/CW
Downlink: 145.930 to 145.870 MHz USB/CW

Dutch Transponder:
Uplink: 435.225 to 435.275 MHz LSB/CW
Downlink: 145.925 to 145.875 MHz USB/CW

Indian Beacon: 145.9360 MHZ CW
Dutch Beacon: 145.860 MHz 12WPM with CW message

Mode and Antenna Polarization:
V: LHCP
U: RHCP

Official Webpage: http://www.amsatindia.org/hamsat.htm

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=30

To know what transponder is switched on please listen for the beacon
that is active. Each transponder has a different beacon.
[03232012]
=====
SO-50 SAUDISAT-1C
Catalog number: 27607
Launch date: December 20, 2002 1700z
Launch site: Baikonur, Kazakhstan

Status: Operational

Current Mode: V/u

Uplink: 145.850 MHz FM - 67.0 Hz PL tone
Downlink: 436.795 MHz

Mode and Antenna Polarization:
V: Linear
U: Linear

Official Webpage: http://saudisat.kacst.edu.sa/index.shtml
(not up and running currently)

To switch the transmitter on, you need to send a CTCSS tone of 74.4
Hz. The order of operation is thus: (allow for Doppler as necessary):
1) Transmit on 145.850 MHz with a tone of 74.4 Hz to arm the 10 minute
timer on board the spacecraft.
2) Now transmit on 145.850 MHz (FM Voice) using 67.0 Hz to PT the re-
peater on and off within the 10 Minute window.
3) Sending the 74.4 tone again within the 10 minute window will reset
the 10 minute timer.
[02092011]
=====
FO-29 JAS-2
Catalog number: 24278
Launch Date: August 17, 1996

Status: Operational
Current Mode: V/u (Mode JA)

Voice/CW (Mode JA)
Uplink: 145.90 to 146.00 MHz CW/LSB
Downlink: 435.80 to 435.90 MHz CW/USB
Beacon: 435.795 MHz

Digital Mode JD
Uplinks: 145.850 MHz FM
145.870 MHz FM
145.910 MHz FM
Downlink: 435.910 MHz 1200-baud BPSK or 9600-baud FSK
Callsign: 8J1JCS
Digitalker: 435.910 MHz

Mode and Antenna Polarization:
V: RHCP
U: RHCP

For current operational schedule for FO-29:
http://www.ne.jp/asahi/m-arai/gkz/satinfo/fo29e.htm

JARL English webpage:
http://www.jarl.or.jp/English/5_Fuji/ejasmenu.htm

AMSAT-NA Webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID
=5&retURL=/satellites/status.php

Mineo Wakita, JE9PEL, has created a simple decoder program for FO29's
CW telemetry downlink: http://www.ne.jp/asahi/hamradio/je9pel/
fo29cwts.htm
[01122012]
=====
AO-27 AMRAD
Catalog number: 22825
Launch date: September 26, 1993 0140z
Launch site: Kourou, French Guiana

Status: Software Reload

Current Mode: V/u

Uplink: 145.850 MHz FM
Downlink: 436.797 MHz FM

Mode and Antenna Polarization:
V: Linear
U: Linear

Official Webpage: http://www.ao27.org
[10152012]
=====
AO-7 AMSAT OSCAR 7
Catalog number: 07530
Launch Date: November 15, 1974
Launch site: Vandenberg AFB, California, USA

Status: Operational

Current Mode: Alternating between Mode A and B every 24 hours

Uplink: 145.850 to 145.950 MHz CW/USB Mode A
432.125 to 432.175 MHz CW/LSB Mode B
Downlink: 29.400 to 29.500 MHz CW/USB Mode A (1W PEP)
145.975 to 145.925 MHz CW/USB Mode B (8W PEP)
145.975 to 145.925 MHz CW/USB Mode C (2W PEP)
Beacons: 29.502 MHz CW
145.972 MHz CW
435.100 MHz CW
2304.100 MHz CW

Official Webpage:
http://www.amsat.org/amsat-new/satellites/sat_summary/ao7.php
[04242012]
=====
INTERNATIONAL SPACE STATION (ISS) - ARISS
Catalog number: 25544
Launch date: November 20, 1998 0640z (ZARYA module)
Launch sites: Baikonur, Kazakhstan
Kourou, French Guiana
Uchinoura Space Center, Japan
Kennedy Space Center, Titusville, Florida, USA

Status: Operational

Current Active Modes: FM Repeater - OFF
Voice - V/v
BBS - OFF
2m APRS - ON
2m Digi - ON
70cm APRS - ?
70cm Digi - ?

SSTV - OFF

Expedition 33 Crew (July 2012 - November 2012):
Commander: Sunita Williams KD5PLB
Flight Engineer: Yuri Malenchenko RK3DUP
Flight Engineer: Akihiko Hoshide KE5DNI

Available Modes and Frequencies:
Digital/APRS:
Worldwide 2m packet uplink: 145.825 MHz FM 1k2
Worldwide 2m packet downlink: 145.825 Mhz FM 1k2
Worldwide 70cm packet uplink: 437.550 Mhz FM 1k2
Worldwide 70cm packet downlink: 437.550 Mhz FM 1k2

Voice:
Region 1 voice uplink: 145.200 MHz FM
Region 2/3 voice uplink: 144.490 MHz FM
Worldwide downlink: 145.800 MHz FM

Crossband Repeater:
Repeater Uplinks: 1269.650 MHz FM
437.800 MHz FM
145.990 MHz FM - 67.0 PL (Kenwood)
Repeater Downlink: 145.800 MHz FM
437.800 MHz FM (Kenwood)

SSTV Robot 36:
Downlink: 145.800 MHz FM

Mode and Antenna Polarization:
V: Linear
U: Linear

Callsigns:
Belgian: OR4ISS
German: DP0ISS
Russian: RS0ISS
RZ3DZR
United States: NA1SS
2m Packet Mailbox: RS0ISS-11
2m Digipeater alias: ARISS
70cm Packet Mailbox: RS0ISS-1
70cm Digipeater callsign: RS0ISS
70cm Digipeater alias: ARISS

Official ARISS Webpage: http://www.rac.ca/ariss
ISS Fan Club Webpage: http://www.issfanclub.com
APRS tracking page: http://www.ariss.net/

ISS Daily Crew Schedule: http://spaceflight.nasa.gov/station/timelines
Remember that the crew operates on UTC time. Also, all of the time
line is NOT translated from Russian and posted.
[10012012]

NNNN
/EX

SB SAT @ AMSAT W8ISS $WSR-289.S2
WSR 289 Part 2 10/15/2012

AMSAT NEWS SERVICE BULLETIN 289.S2
FROM AMSAT HQ SILVER SPRING, MD, October 15, 2012
TO ALL RADIO AMATEURS
BID: $WSR-289.S2

Fitsat-1
Catalog number: 38853
Launch Date: October 04, 2012
Launch site: Kibo Japanese Experiment Module, International Space
Station

Status:

Uplink:
Downlink(s): 437.445MHz 1k2 AFSK
5840.00 MHz 115k2 data
LED CW (200w pulses)

Beacon(s): 437.250 MHz CW

Callsign: NIWAKA

URL: http://carpcomm.com/satellite/fitsat1
[10152012]
=====
TechEdSat 38854
Catalog number:
Launch date: October 04, 2012
Launch site: Kibo Japanese Experiment Module, International Space
Station

Uplink(s):
Downlink(s): 437.465 1k2 AFSK

Beacon(s):

Callsign:

URL:http://www.techedsat.com/
[10152012]
=====
We Wish
Catalog number: 38856
Launch date: October 04,2012
Launch Site: Kibo Japanese Experiment Module, International Space
Station

Uplink(s):
Downlink(s): 437.505MHz 1k2 AFSK
437.505MHz SSTV

Beacon(s): 437.505MHz CW

Callsign: JQ1ZIJ

URL:
[10152012]
=====
F-1
Catalog number: 38855
Launch Date: October 04, 2012
Launch Site: Kibo Japanese Experiment Module, International Space
Station

Uplink(s):
Downlink(s): 145.980MHz 1k2 AFSK
437.485MHz FM moduled CW

Baecon(s):

Callsign: XV1VN

URL: http://fspace.edu.vn/
[10152012]
=====
Aeneas
Catalog Number: 38760
Launch Date: September 13, 2012 2139z
Launch Site: Wallops Island, Virginia, USA

Status: On Orbit

Uplink: WiFi 2425MHz
Downlink:
WiFi: 2425MHz
Spread Spectrum: Somewhere in the 70cm band

Beacon: 437.600MHz 1k2 ax25 every 10 seconds

Callsign:

URL:
[10012012]
=====
Cinema
Catalog Number: 36764
Launch Date: September 13, 2012 2139z
Launch Site: Wallops Island, Virginia, USA

Status: On Orbit

Uplink:
Downlink:

Engineering: 2400 - 2450MHz
Telemetery: 2200 - 2300MHz

Beacon:

Callsign:

URL:
[10012012]
=====
CSSWE (Colorado Student Space Weather Experiment)
Catalog Number: 38761
Launch Date: September 12, 2012 2139z
Launch Site: Wallops Island, Virginia, USA

Status: On Orbit

Uplink:
Downlink: 437.345MHz 9k6 with ax.25

Beacon:

Callsign:

URL:
[10012012]
=====
CP5 (Polysat)
Catalog Number: 38763
Launch Date: September 12, 2012 2139z
Launch Site: Wallops Island, Virginia, USA

Status: On Orbit

Uplink:
Downlink: 437.405MHz AFSK on LSB ax.25 over NRZI at 1k2 baud,
every 2
minutes, begins 3.5 hours after first turn-on

Beacon:

Callsign:

URL:
[10012012]
=====
CXBN (Cosmic X-Ray Background Nanosatellite)
Catalog Number: 38762
Launch Date: September 12, 2012 2139z
Launch Site: Wallops Island, Virginia, USA

Status: On Orbit

Uplink:
Downlink: 437.525MHz GFSK ax.25

Beacon:

Callsign:

URL:
[10012012]
=====
Proiteres
Catalog Number: 38756
Launch Date: September 09, 2012 2139z
Launch Site: Satish Dhawan Space Centre, India

Status: On Orbit

Uplink:
Downlink: 437.485MHz FM/AFSK

Beacon:

Callsign: JL3YZK

URL:
[10012012]
=====
RS-40 MiR (Yubileiny-2)
Catalog Number: 38735
Launch Date: July 28, 2012

Status: On Orbit

Uplink:
Downlink(s): 435.265 MHz
435.365 MHz

Beacon:

Callsign:

URL:
[08272012]
=====
HORYU-II
Catalog number: 38340
Launch Date: May 17, 2012 1639z

Status: On Orbit

Uplink: 145.??? MHz
Downlink: 437.375 MHz CW/AX25/FSK

Beacon: 437.375 MHz CW

Callsign: JG6YBW

URL:

IARU Coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=216
[10012012]
=====
XaTcobeo
Catalog Number: 38082
Launch Date: Febrauary 13, 2012 1000z
Launch Site: Kourou, French Guiana

Status: Operational

Uplink:
Downlink: 437.365 MHz FFSK with AX.25

Beacon:

Callsign:

URL:

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=135
[100162012]
=====
UniCubeSat
Catalog Number: 38085(?)
Launch Date: Febrauary 13, 2012 1000z
Launch Site: Kourou, French Guiana

Status: Operational

Uplink:
Downlink: 437.305 MHz 9k6 bps GMSK

Beacon:

Callsign:

URL:
http://www.gaussteam.com/index.php?option=com_content&view=article&id=96:uni
cu
besat&catid=36:unicubesat&Itemid=183

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=133
[10012012]
=====
Robusta
Catalog Number: 38083(?)
Launch Date: Febrauary 13, 2012 1000z
Launch Site: Kourou, French Guiana

Status: On Orbit

Uplink:
Downlink: 437.325 MHz 1k2 FM telemetry (data every 3 min, 20 sec. burst)

Beacon:

Callsign:

URL:

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=122
[10012012]
=====
MO-72 MaSat-1
Catalog Number: 38081
Launch Date: Febrauary 13, 2012 1000z
Launch Site: Kourou, French Guiana

Status: Operational

Uplink:
Downlink: 437.345 MHz GFSK 625/1250 bps
437.345 MHz CW

Beacon:

Callsign:

URL:

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=126
[10012012]
=====
Goliat
Catalog Number: 38084(?)
Launch Date: Febrauary 13, 2012 1000z
Launch Site: Kourou, French Guiana

Status: Operational

Uplink:
Downlink: 437.485 MHz 1k2 AFSK

Beacon:

Callsign:

URL:

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=98
[10012012]
=====
E-St@r
Catalog Number: 38079
Launch Date: Febrauary 13, 2012 1000z
Launch Site: Kourou, French Guiana

Status: On Orbit

Uplink:
Downlink: 437.445 MHz 1k2 bps AFSK

Beacon:

Callsign:

URL:

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=130
[10012012]
=====
ALMASat-1
Catalog Number: 38078
Launch Date: Febrauary 13, 2012 1000z
Launch Site: Kourou, French Guiana

Status: On Orbit

Uplink:
Downlink: 437.465 MHz 1k2 bps FSK
2407.850 MHz

Beacon:

Callsign:

URL:

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=39
[10012012]
=====
RS-39 Chibis-M
Catalog Number: 38051
Launch Date: October 30, 2011 10:11:00 UTC
Launch site: Tyuratam (Baikonur Cosmodrome), Kazakhstan

Status: Operational

Uplink:
Downlink:

Beacon: 435.315 MHz CW
435.215 MHz CW

Callsign:

URL:

IARU coordination status page:
[07302012]
=====
JUGNU

Catalog Number: 37839
Launch Date: October 12, 2011 05:30:00 UTC
Launch site: Satish Dhawan Space Centre, India

Status: On Orbit

Uplink: 145.??? MHz 1k2 (mode?)
Downlink: 437.505 MHz 9k6 (mode?)

Beacon: 437.275 MHz 15 wpm (?) CW

Callsign:

URL: http://www.iitk.ac.in/me/jugnu/index.htm

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=160
[07092012]
=====
SRMSAT
Catalog Number: 37841
Launch Date: October 12, 2011 05:30:00 UTC
Launch site: Satish Dhawan Space Centre, India

Status: On Orbit

Uplink: 145.900 MHz 1k AX.25 (speed?)
Downlink: 437.500 MHz 2k4 AX.25

Beacon: 437.425 MHz 12 wpm CW

Callsign:

URL: http://srmsat.in/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=181
[07092012]
=====
HRBE (E1P Explorer 1 [Prime] CubeSat (E1P-U2))
Catalog Number: 37855
Launch Date: October 28, 2011
Launch site: Vandenberg Air Force Base, California, USA

Status: On Orbit

Uplink: 437.305 MHz (???)
Downlink: 437.505 MHz AX.25 (SSB?)

Beacon:

Callsign:

URL: http://ssel.montana.edu/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=116
[01122012]
=====
M-Cubed
Catalog Number: 37855
Launch Date: October 28, 2011
Launch site: Vandenberg Air Force Base, California, USA

Status: On Orbit

Uplink:
Downlink: 437.485 MHz AX.25

Beacon:

Callsign:

URL: http://umcubed.org/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=215
[01122012]
=====
RAX-2
Catalog Number: 37853
Launch Date: October 28, 2011
Launch site: Vandenberg Air Force Base, California, USA

Status: Operational

Uplink:
Downlink: 437.345MHz 9k6 GMSK

Beacon:

Callsign:

URL: http://rax.engin.umich.edu//

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=221
[03232012]
=====
AO-71 AubieSat-1
Catalog Number: 37854
Launch Date: October 28, 2011
Launch site: Vandenberg Air Force Base, California, USA

Status: On Orbit

Uplink:
Downlink: 437.475 MHz 1k2 AX.25

Beacon: 437.475 MHz CW

Callsign: KI4NQO

URL: http://www.space.auburn.edu/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=148
[12262011]
=====
O/OREOS
Catalog Number: 37224
Launch Date: November 20, 2010
Launch site: Kodiak Launch Complex, Alaska, USA

Status: On Orbit

Uplink:
Downlink: 437.035 MHZ AX.25

Beacon:

Callsign:

URL: http://www.ooreos.org/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=146
[02092011]
=====
Rax-1 Radio Aurora Explorer
Catalog Number: 37223
Launch Date: November 20, 2010
Launch site: Kodiak Launch Complex, Alaska, USA

Status: On Orbit

Uplink:
Downlink: 437.505 MHz 9k6 GMSK

Beacon:

Callsign: RAX-1

URL: http://rax.engin.umich.edu/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=165
[02092011]
=====
FO-69 Fastrac-1 Sara Lily
Catalog Number: 37227
Launch Date: November 20, 2010
Launch site: Kodiak Launch Complex, Alaska, USA

Status: Operational

Uplink 1: 145.980 MHz 1k2 baud
Uplink 2: 145.825 MHz 1k2 baud
Downlink: 437.345 MHz 1k2 and 9k6 baud

Beacon: 437.435 MHz 1k2 AX.25

Callsign: Fast1

URL: http://fastrac.ae.utexas.edu/index.php

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=83
[07052011]
=====
FO-70 Fastrac-2 Emma
Catalog Number: 37380
Launch Date: November 20, 2010
Launch site: Kodiak Launch Complex, Alaska, USA

Status: Operational

Uplink 1: 435.025 MHz 1k2 baud
Uplink 2: 437.435 MHz 9k6 baud
Downlink: 145.825 MHz 1k2 and 9k6 baud

Beacon: 145.825 MHz 1k2 AX.25

Callsign: Fast2

URL: http://fastrac.ae.utexas.edu/index.php

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=84
[12162011]
=====
StudSat
Catalog Number: 36796
Launch Date: July 12, 2010 0352z
Launch site: Satish Dhawan Space Centre, India

Status: On Orbit

Uplink: 437.505MHz, 9600bps FSK
Downlink: 437.505MHz, 9600bps FSK
Beacon : 437.505MHz, 20bps ASK

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=164
[02092011]
=====
TIsat-1
Catalog Number: 36799
Launch Date: July 12, 2010 0352z
Launch site: Satish Dhawan Space Centre, India

Status: On orbit

Callsign: HB9DE

Uplink: 145.980MHz FM, AFSK
Downlink: 437.305MHz FM, AFSK
Beacon: 437.305MHz CW

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=118
[02092011]
=====
SwissCube
Catalog Number: 35932
Launch Date: September 23, 2009 0621z
Launch site: Satish Dhawan Space Centre, India

Status: Operational

Callsign: HB9EG

Beacon(100mw): 437.5050MHz CW
Beacon(1w): 437.5050MHz FSK 1k2bps

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=109
[02092011]
=====
UWE-2
Catalog Number: 35934
Launch Date: September 23, 2009 0621z
Launch site: Satish Dhawan Space Centre, India

Status: In Orbit

Beacon(500mw): 437.3850 MHz AFSK 1k2bps
437.3850 MHz FSK 9k6bps

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=110
[02092011]
=====
ITUpsAT1
Catalog Number: 35935
Launch Date: September 23, 2009 0621z
Launch site: Satish Dhawan Space Centre, India

Status: Operational

Beacon(100mw): 437.325MHz CW
Beacon(1w): 437.325MHz 19k2bps

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=113
[02092011]
=====
BEESAT

Catalog Number: 35933
Launch Date: September 23, 2009 0621z
Launch site: Satish Dhawan Space Centre, India

Status: Operational

Callsign: DP0BEE

Beacon(100mw): 436.000MHz CW
Beacon(500mw): 436.000MHz GMSK 4k8bps
Beacon(500mw): 436.000MHz GMSK 9k6bp
[02092011]
=====
CP-6
Catalog Number: 35003
Launch Date: May 19, 2009 2355z
Launch site: Wallops Island, Virginia, USA

Status: Operational

Downlink: 437.365 MHz 1k2 AFSK

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=121
[07302012]
=====
HAWKSAT 1
Catalog number: 35004
Launch Date: May 19, 2009 2355z
Launch site: Wallops Island, Virginia, USA

Status: operational

Downlink: 437.345 MHz ?

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=105
[07302012]
=====
Pharmasat
Catalog Number: 35002
Launch Date: May 19, 2009 2355z
Launch site: Wallops Island, Virginia, USA

Status: Operational

Downlink: 437.465 MHz 1k2 AFSK

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=94
[02092011]
=====
ANUSAT
Catalog Number: 34808

Launch Date: April 20, 2009 0115z
Launch Site: Satish Dhawan Space Centre, India

Status: ?

Downlink: 435.000 MHz
Uplink: 145.800 MHz

Telemetry: 137.400 MHz
[02092011]
=====
SOHLA-1 (ASTRO TECH.)
Catalog Number: 33496
Launch Date: January 23, 2009 0354z
Launch site: Tanegashima Space Center, Japan

Status: Operational

Proposed Frequencies and Modes:
Downlink: 437.505 MHz AFSK/CW
Beacon: 437.505 MHz AFSK/CW

Callsign:

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=101
[02092011]
=====
KAGAYAKI (Solan Co.)
Catalog Number: 33495
Launch Date: January 23, 2009 0354z
Launch site: Tanegashima Space Center, Japan

Status: In Orbit

Downlink: 437.375 MHZ FSK9k6/CW
Beacon: 437.375 MHz FSK9k6/CW

IARU coordination status page:

AMSAT-NA webpage:

[02092011]
=====
STARS (Kagawa Univ.) (Twin Satellites)
Catalog Number: 33498
Launch Date: January 23, 2009 0354z
Launch site: Tanegashima Space Center, Japan

Status: Operational ?

Downlinks: 437.485 MHz FM/CW
437.465 MHz FM/CW
Beacons: 437.305 MHz FM/CW
437.275 MHz FM/CW

Callsigns: JR5YBN
JR5YBO

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=99

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID=121&retURL
=/satellites/status.php
[02092011]
=====
KKS-1 (Tokyo MCIT)
Catalog Number: 33499
Launch Date: January 23, 2009 0354z
Launch site: Tanegashima Space Center, Japan

Status: Operational

Downlink: 437.455 MHz AFSK/CW
Beacon: 437.385 MHz AFSK/CW

Callsign: JQ1YYY

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=107

AMSAT-NA webapge:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID=120&retURL
=/satellites/status.php
[20092011]
=====
PRISM (Tokyo Univ.)
Catalog Number: 33493
Launch Date: January 23, 2009 0354z
Launch site: Tanegashima Space Center, Japan

Status: Operational ?

Downlink: 437.425 MHz AFSK/GMSK/CW
Beacon: 437.250 MHz AFSK/GMSK/CW

Callsign: JQ1YCX

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=97

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID=119&retURL
=/satellites/status.php
[02092011]
=====
RS-30 Radio Sputnik 30 (Yubileiny)
Catalog Number: 32953
Launch Date: May 23, 2008 1520z
Launch site: Plesetsk Missile and Space Complex, Russia

Status: Operational

Curent Modes: Telemetry
Audio
Images

Downlinks: 435.315 MHz
435.215 MHz

AMSAT-NA website:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID=115&ret
URL=/satellites/status.php

Official website:
http://www.npopm.com/?cid=leoca&caid=43
[02092011]
=====
CanX-2
Catalog number: 32790
Launch Date: April 28, 2008 0354z
Launch site: Satish Dhawan Space Centre, India

Status: Operational in range of ground station only

Downlink: 437.478 MHz GFSK

For the latest project status update please visit the Can X-2 web
page: http://www.utias-sfl.net/nanosatellites/CanX2/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=46
[02092011]
=====
AAUSAT-II
Catalog number: 32788
Launch Date: April 28, 2008 0354z
Launch site: Satish Dhawan Space Centre, India

Status: Operational

Downlink: 437.425 MHz 1k2 baud packet

For the latest project status update please visit the AAUSAT-II web
page:
http://www.aausatii.aau.dk/homepage/index.php?language=en&page=home

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=60
[02092011]
=====
CO-65 CUTE-1.7+APD II
Catalog number: 32785
Launch Date: April 28, 2008 0354z
Launch site: Satish Dhawan Space Centre, India

Status: Operational

Downlink: 437.475 MHz 9k6 Packet
Uplink: 1267.600 Mhz

Telemetry Beacon:
Downlink: 437.2750 MHz CW

For the latest project status update please visit the Cute-1.7+APD II
web page: http://lss.mes.titech.ac.jp/ssp/cute1.7/index_e.html

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=78

Command Station blog website:
http://lss.mes.titech.ac.jp/ssp/cute1.7/blog/

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID=112&retURL
=/satellites/status.php
[03232012]
=====
Compass-1
Catalog number: 32787
Launch Date: April 28, 2008 0354z
Launch site: Satish Dhawan Space Centre, India

Status: Operational

Current Mode: dependant on last received command

Uplink: 145.980 MHz FM
Downlink: 437.275 Mhz CW
437.405 MHz Packet

For the latest project status update please visit the Compass 1 web
page: http://www.raumfahrt.fh-aachen.de/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=52

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID=114&retURL
=/satellites/status.php
[06162011]
=====
CO-66 Seeds II
Catalog number: 32791
Launch Date: April 28, 2008 0354z
Launch site: Satish Dhawan Space Centre, India

Status: Operational

Downlink: 437.485 MHz

Callsign: JQ1YGU

For the latest project status update please visit the Seeds 2 web
page: http://cubesat.aero.cst.nihon-u.ac.jp/english/seeds_2_e.html

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=36

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID=113&retURL
=/satellites/status.php
[073092011]
=====
CAPE-1
Catalog Number: 31130
Launch Date: April 17,2007 0702z
Launch site: Baikonur, Kazakhstan

Status: Intermittent

Current Mode: /u

TLM Downlink: 435.245 MHz 9600 bs FSK AX.25
CW Beacon: 435.245 MHz CW

Callsign: K5USL

TLM and CW interchange every 30 seconds.

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID=94&retURL=
/satellites/status.php

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=72
[02092011]
=====
CP3
Catalog Number: 31129
Launch Date: April 17,2007 0702z
Launch site: Baikonur, Kazakhstan

Status: Operational

Current Mode: /u

Downlink: 436.845 MHz 1200 bps AFSK AX.25

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=74
[02092011]
=====
CO-58 CubeSat XI-V
Catalog number: 28895
Launch Date: October 27, 2005 0652z
Launch site: Plesetsk Missile and Space Complex, Russia

Status: Operational - CW Beacon only

Current Mode: /u

Telemetry Downlink: 437.4250 MHz AFSK 1200bps using AFK protocol
Beacon: 437.2750 MHz CW

Callsign: JQ1YGW

Official Webpage: http://www.space.t.u-tokyo.ac.jp/cubesat/mission/V/

Pictures received by Mineo Wakita - JE9PEL:
http://www.ne.jp/asahi/hamradio/je9pel/xivpicte.htm

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=37
[02092011]
=====
CO-57 CubeSat XI-IV
Catalog number: 27848
Launch date: June 30, 2003 1415z
Launch site: Plesetsk Missile and Space Complex, Russia

Status: ?????

Current Mode: /u

Beacon: 436.8475 MHz CW
Telemetry : 437.4900 MHz AFSK 1200 BPS

Callsign: JQ1YGW

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID=96&retURL
=/satellites/status.php

Official Webpage: http://www.space.t.u-tokyo.ac.jp/cubesat/mission/V/
[02092011]
=====
QuakeSat
Catalog Number: 27845
Launch Date: June 30, 2003 1415z
Launch site: Plesetsk Missile and Space Complex, Russia

Status: Telemetry only

Current Mode: 9600 baud data packet

Mode U packet
Downlink: 436.675 MHz 9k6 BPS

Quakesat webpage:
http://www.quakefinder.com/services/quakesat-ssite/
[02252011]
=====
CO-55 Cute-1.7+APD II
Catalog Number: 27844
Launch date: June 30, 2003 1415z

Launch site: Plesetsk Missile and Space Complex, Russia

Status: Operational

Current Mode: CW downlink worldwide
AX25 Packet with uplink command over Japan only

Mode U Telemetry
Downlink: 437.4000 MHz AFSK 1200 BPS

Mode U TLM Beacon
Downlink: 436.8375 MHz CW

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID=69&retURL
=/satellites/status.php

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=78
[02092011]
=====
NO-44 PCSAT
Catalog number: 26931
Launch Date: September 30, 2001 0240z
Launch site: Kodiak Launch Complex, Alaska, USA

Status: Telemetry only

Current Mode: V/v

General Usage Uplink/Downlink: 145.827 MHz 1200 Baud
Special Usage Downlink: 144.390 Mhz 1200 Baud

PCSAT APRS page: http://pcsat.aprs.org

aprstlm Telemetry Decoder program:
http://www.xciv.org/~iain/aprstlm/v1.2/
[02092011]
=====
RS-22 RADIO SPORT 22 (MOZHAYETS 4)
Catalog number: 27939
Launch Date: September 27, 2003 0612z
Launch site: Plesetsk Missile and Space Complex, Russia

Status: Operational - 70cm cw only

Current Mode: /u

CW Beacon - 435.352 MHz
145.818 MHz

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID=76&retURL
=/satellites/status.php
[02092011]

=====
LO-19 LUSAT
Catalog number: 20442
Launch date: January 22, 1990
Launch site: Kourou, French Guiana

Status: CW Beacon only

Uplinks: 145.840 MHz 1200-baud Manchester FSK
145.860 MHz 1200-baud Manchester FSK
145.880 MHz 1200-baud Manchester FSK
145.900 MHz 1200-baud Manchester FSK

CW downlink: 437.125 MHz

Digital downlink: 437.150 MHz SSB (RC-BPSK 1200-baud PSK)

Broadcast Callsign: LUSAT-11
BBS: LUSAT-12

General information and telemetry samples can be found at:
www.telecable.es/personales/ea1bcu
[02092011]
=====
UO-11 OSCAR-11
Catalog number: 14781
Launch Date: March 1, 1984
Launch site: Vandenburg AFB, California, USA

Status: Operational ?

Current Mode: /v

Telemetry Downlink: 145.825 MHz FM 1200 AFSK
UHFBeacon: 435.025 MHz
Mode-S Beacon: 2401.500 MHz

Mode and Antenna Polarization:
V: RHCP
S: LHCP

Webpage: http://www.users.zetnet.co.uk/clivew/
MPEG3 files: http://www.ne.jp/asahi/hamradio/je9pel/uo11tlme.htm
[07052011]
=====
INTERNATIONAL SPACE STATION (ISS) - ARISS
Catalog number: 25544
Launch date: November 20, 1998 0640z (ZARYA module)
Launch sites: Baikonur, Kazakhstan
Kourou, French Guiana
Uchinoura Space Center, Japan
Kennedy Space Center, Titusville, Florida, USA

Status: Operational

Current Active Modes: FM Repeater - OFF
Voice - V/v
BBS - U/u
2m APRS - ON
2m Digi - ON
70cm APRS - ?
70cm Digi - ?
SSTV - OFF

Expedition 33 Crew (July 2012 - November 2012):
Commander: Sunita Williams KD5PLB
Flight Engineer: Yuri Malenchenko RK3DUP
Flight Engineer: Akihiko Hoshide KE5DNI

Available Modes and Frequencies:
Digital/APRS:
Worldwide 2m packet uplink: 145.825 MHz FM 1k2
Worldwide 2m packet downlink: 145.825 Mhz FM 1k2
Worldwide 70cm packet uplink: 437.550 Mhz FM 1k2
Worldwide 70cm packet downlink: 437.550 Mhz FM 1k2

Voice:
Region 1 voice uplink: 145.200 MHz FM
Region 2/3 voice uplink: 144.490 MHz FM
Worldwide downlink: 145.800 MHz FM

Crossband Repeater:
Repeater Uplinks: 1269.650 MHz FM
437.800 MHz FM
145.990 MHz FM - 67.0 PL (Kenwood)
Repeater Downlink: 145.800 MHz FM
437.800 MHz FM (Kenwood)

SSTV Robot 36:
Downlink: 145.800 MHz FM

Mode and Antenna Polarization:
V: Linear
U: Linear

Callsigns:
Belgian: OR4ISS
German: DP0ISS
Russian: RS0ISS
RZ3DZR
United States: NA1SS
2m Packet Mailbox: RS0ISS-11
2m Digipeater alias: ARISS
70cm Packet Mailbox: RS0ISS-1
70cm Digipeater callsign: RS0ISS
70cm Digipeater alias: ARISS

Official ARISS Webpage: http://www.rac.ca/ariss
ISS Fan Club Webpage: http://www.issfanclub.com

APRS tracking page: http://www.ariss.net/

ISS Daily Crew Schedule: http://spaceflight.nasa.gov/station/timelines
Remember that the crew operates on UTC time. Also, all of the time
line is NOT translated from Russian and posted.
[09102012]
NNNN
/EX

SB SAT @ AMSAT W8ISS $WSR-289.S3
WSR 289 Part 3 10/15/2012

AMSAT NEWS SERVICE BULLETIN 289.S3
FROM AMSAT HQ SILVER SPRING, MD, October 15, 2012
TO ALL RADIO AMATEURS
BID: $WSR-289.S3

THE FOLLOWING ARE IN ORBIT BUT ARE NON-OPERATIONAL AT THIS TIME:

NANOSAIL-D
Catalog Number: 37361
Ejection Date: January 17, 2011

Status: Non - Operational

Downlink: 437.270 MHz AX.25

URL: http://nanosaild.engr.scu.edu/dashboard.htm

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=115
[07302012]
=====
HO-68 HOPE-1 (CAS-1) (XW-1)
Catalog Number: 36122
Launch Date: December 15, 2009 0231z
Launch site: Taiyuan Space Center, PRC

Status: Telemetry only

Callsign:
Broadcast: BJ1SA-11
BBS: BJ1SA-12

Uplinks: 145.8250 MHz FM, PL 67.0 Hz.
145.9250 - 145.9750 MHz SSB/CW
145.8250 MHz AFSK 1200 BPS
Downlinks: 435.6750 MHz FM
435.7650 - 435.7150 MHz SSB/CW
435.6750 MHz AFSK 1200 BPS

Beacon: 435.7900 MHz CW

Mode and Antenna Polarization:
V: LHCP 2.0dBi max

U: RHCP 3.0dBi max

IARU coordination page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=108

For more information about XW-1 (CAS-1):
http://
[04302012]
=====
SO-67 SumbandilaSat
Catalog Number: 35870
Launch Date: September 17, 2009 1555z
Launch site: Baikonur, Kazakhstan

Status: Non - Operational

Callsign: ZS0SUM

Uplink: 145.875MHz FM tone 233.6 Hz
Downlink: 435.345MHz FM

Mode and Antenna Polarization:
V: Linear
U: Linear

For more information about SO-67:
http://www.amsatsa.org.za/

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=88
[01272012]
=====
CP4
Catalog Number: 31132
Launch Date: April 17, 2007

Status: Non-Operational

Current Mode: /u

TLM Downlink: 437.325 MHz 1200 bps FSK AX.25
CW Beacon: 437.325 MHz CW

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=79
[09062010]
=====
LIBERTAD-1
Catalog Number: 31128
Launch Date: April 17, 2007

Status: Non-Operational

Current Mode: V/u APRS Packet ax25

Callsign: 5K3L

Uplink: 145.825 MHz 1200 AFSK ax25 APRS
Downlink: 437.399 MHz 1200 AFSK ax25 APRS

Telemetry Beacon: 437.4050 MHz 1200 AFSK ax25

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=76
[09062010]
=====
PO-63 PEHUENSAT-1
Catalog Number: 29712
Launch Date: January 10, 2007

Status: Non-Operational

Current Mode: V/v

Uplink/Downlink: 145.825 Mhz FM
Voice Recorder: 145.825 Mhz FM

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=51
[09062010]
=====
NCUBE-2
Catalog number: 28897
Launch Date: October 27, 2005

Status: Still attached to XO-53 (SSETI)?

Proposed Callsign: TBA
Proposed Transmit Frequency: 437.305
2407.250

Official Website: http://www.ncube.no

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=24
[09062010]
=====
XO-53 SSETI
Catalog number: 28894
Launch Date: October 27, 2005

Status: Non-operational

Voice Uplink: 437.250 MHz FM 67Hz CTCSS
Voice Downlink: 2401.835 MHz FM
Packet Up/Downlink: 437.250 MHz 9k6 packet
Packet Downlink 2401.835 MHz 38k4 packet

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=54
[09062010]

=====
UWE-1
Catalog Number: 28892
Launch Date: October 27, 2005

Status: Non-Operational

Mode U Telemetry
Downlink: 437.5050 MHz 9600 AFSK

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=53
[09062010]
=====
AO-51 ECHO
Catalog number: 28375
Launch date: June 29, 2004 0745z
Launch site: Baikonur, Kazakhstan

Status: Non - Operational

Current Mode(s):
Voice repeater: V/u
Uplink: 145.880 MHz FM
Downlink: 435.150 MHz FM

Telemetry: Recovery efforts
Downlink: 435.150MHz 9k6

Analog voice downlink: 435.300 MHz FM
435.150 MHz FM
2401.200 Mhz FM
Analog voice uplink: 145.860 MHZ FM
145.880 MHz USB
145.880 MHz FM
145.920 MHz FM
145.920 MHz FM - 67 Hz PL tone burst
1268.705 MHz FM
Digital Downlinks: 435.150 MHz FM 38k4 PBP, 1 watt output
435.150 MHz FM 9k6 Pacsat Broadcast Protocol
2401.200 MHz FM 38k4 bps, AX.25
Digital Uplink: 145.860 MHz FM 9k6 Pacsat Broadcast Protocol
1268.703 mhz FM 9k6 Pacsat Broadcast Protocol
Beacon: 435.150 MHz

Mode and Antenna Polarization:
T: Linear
V: Linear
U: TX A (usually digital)LHCP
TX B (usually analog) RHCP
L: Linear
S: Linear

Broadcast: PECHO-11
BBS: PECHO-12

Official Webpage: http://www.amsat.org/amsat-new/echo/CTNews.php

IARU coordination status page:
http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=19
[12062011]
=====
CANX-1
Catalog Number: 27847
Launch Date: June 30, 2003

Status: Non-Operational

Downlink: 437.8800 MHz AFSK 1k2bps
[06052009]
=====
DTUSAT
Catalog Number: 27842
Launch Date: June 30, 2003

Status: Non-Operational

Current Mode: 2k4 AFSK Packet last reported

Downlink: 437.475MHz

Officail webpage: http://dtusat1.dtusat.dtu.dk/

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID=101&retURL
=satellites/all_oscars.php
[02212009]
=====
AO-49 AATiS OSCAR-49 (SAFIR-M)
Catalog number: 27605
Launch Date: December 20, 2002

Status: Non-operational.

Uplink: 435.275 MHz 1200-baud AFSK
Downlink: 145.825 MHz 9600-baud FSK
(optional voice message)

Broadcast callsign: DP0AIS

Official webpage: http://amend.gmxhome.de
[01222007]
=====
MO-46 TIUNGSAT-1
Catalog number: 26548
Launch date: September 26, 2000

Status: Telemetry only

Uplinks: 145.850 MHz
145.925 MHz 9600-baud FSK
Downlink: 437.325 MHz

Broadcast callsign: MYSAT3-11
BBS: MYSAT3-12

TiungSat-1 is Malaysia's first micro-satellite and in addition to
commercial land and weather imaging payloads offers FM and FSK
Amateur Radio communication.

TiungSat-1, named after the mynah bird of Malaysia, was developed as
a collaborative effort between the Malaysian government and Surrey
Satellite Technology Ltd.
[03302009]
=====
NO-45 SAPPHIRE
Catalog number: 26932
Launch Date: September 30, 2001

Status: Non-Operational

Downlink: 437.095 MHz 1200 baud AX-25 AFSK
Uplink: 145.945 MHz UI Digipeater
Digi Callsign: KE6QMD

Everyone is welcome to use the digipeating/APRS features of Sapphire,
as per the user service agreement located at the following URL:
http://web.usna.navy.mil/~bruninga/pcsat/contract.txt
[03132005]
=====
SO-42 SAUDISAT-1B
Catalog number: 26549
Launch date: September 26, 2000

Status: Non-Operational

Downlink: 437.075 MHz

Broadcast Callsign: SASAT2-11
BBS: SASAT2-12

Further information is available at:
http://www.amsat.org/amsat/sats/n7hpr/so42.html
[01222007]
=====
SO-41 SAUDISAT-1A
Catalog number: 26545
Launch Date: September 26, 2000

Status: Non-Operational

Uplink: 145.850 MHz
Downlink: 436.775 MHz

Broadcast Callsign: SASAT1-11
BBS: SASAT1-12

Further information is available at:
http://www.amsat.org/amsat/sats/n7hpr/so41.html
[01222007]
=====
AO-40 AMSAT OSCAR 40
Catalog number: 26609
Launch Date: November 16, 2000

Status: Non-Operational

Uplinks

V-band: 145.840 - 145.990 MHz CW/LSB
U-band: 435.550 - 435.800 MHz CW/LSB
L1-band: 1269.250 - 1269.500 MHz CW/LSB
L2-band: 1268.325 - 1268.575 MHz CW/LSB

Downlinks

S2-band: 2401.225 - 2401.475 MHz CW/USB
K-band: 24048.010 - 24048.060 MHz CW/USB
Beacon: 2401.323 MHz
24048.035 MHz

P3-D Telemetry Beacons (IHU)

BEACON General Beacon(GB) Middle Beacon(MB) Engineering Beacon(EB)
2 m none 145.898 MHz none
70cm 435.438 MHz 435.588 MHz 435.838 MHz
13cm(1) 2400.188 MHz 2400.338 MHz 2400.588 MHz
13cm(2) 2401.173 MHz 2401.323 MHz 2401.573 MHz
3cm 10450.975 MHz 10451.125 MHz 10451.375 MHz
1.5cm 24047.885 MHz 24048.035 MHz 24048.285 MHz
[07162007]
=====
OO-38 OPAL
Catalog Number: 26063
Launch Date: January 27, 2000

Status: Non-Operational

Mode U TLM Beacon
Downlink: 437.1000 MHz 9600 FSK
[08132007]
=====
UO-36 UoSAT-12
Catalog number: 25693
Launch date: April 21, 1999

Status: Unknown

Uplink: 145.960 MHz (9600-baud FSK)
Downlinks: 437.025 MHz
437.400 MHz

Broadcast Callsign: UO121-11
BBS: UO121-12

The VK5HI viewer shareware for UO-36 is available on the AMSAT-NA web
site at the following URL:
ftp://ftp.amsat.org/amsat/software/win32/display/ccddsp97-119.zip
[01222007]
=====
SO-35 SUNSAT
Catalog Number: 25636
Launch date:February 23, 1999

Status: Non-Operational

Downlink: Mode B Repeater: 436.291 MHz
Mode J Digipeater: 436.250 MHz

Uplinks: Mode B Repeater: 145.825 MHz
Mode J Digipeater: 145.825 MHz
145.900 MHz

For more information of SUNSAT vist the satellite web site:
http://esl.ee.sun.ac.za/projects/sunsat/
[01222007]
=====
PO-34 PANSAT
Catalog number: 25520
Launch date: October 30, 1998

Status: Telemetry downloads only

Uplink/downlink: 436.500 MHz

Official Webpage: http://www.sp.nps.navy.mil/pansat/
[05092004]
=====
SO-33 SEDSAT-1
Catalog number: 25509
Launch date: October 24, 1998

Status: Semi-operational

Downlink: 437.910 MHz FM (9600-baud FSK)

The satellite is not currently available for uplink transmissions and
the image and transponder recovery efforts have been unsuccessful.

For more information on SedSat-1 visit the satellite web site:
http://seds.uah.edu/projects/sedsat/sedsat.htm
[09042006]
=====

GO-32 Gurwin TechSat-1B
Catalog number: 25397
Launch Date: July 10, 1998

Status: Non-Operational

Current Modes:
Telemetry : /u

Downlink: 435.225 MHz FM (9600-baud FSK)
435.325 Mhz - Not Available - temperature problems
Uplinks: 145.850 FM
145.890 FM
145.930 FM
1269.700 FM
1269.800 FM
1269.900 FM

Broadcast Callsign: 4XTECH-11
BBS Callsign: 4XTECH-12

More information of GO-32 can be found at:
http://asri.technion.ac.il/techsat/

AMSAT-NA webpage:
http://www.amsat.org/amsat-new/satellites/satInfo.php?satID=14&retURL
=/satellites/status.php
[07172010]
=====
TO-31 TMSAT-1
Catalog number: 25396
Launch Date: July 10, 1998

Status: Non-operational

Uplink: 145.925 MHz 9600 baud FSK
Downlink: 436.925 MHz 9600 baud FSK

Broadcast callsign: TMSAT1-11
BBS: TMSAT1-12
[05012006]
=====
MO-30 UNAMSAT-2
Catalog Number: 24305
Launch Date: September 5, 1996

Status: Non-operational

Downlink: 435.1380 MHz AFSK 1200 BPS
Downlink: 435.2060 MHz AFSK 1200 BPS
Uplink: 145.8150 MHz AFSK 1200 BPS
Uplink: 145.8350 MHz AFSK 1200 BPS
Uplink: 145.8550 MHz AFSK 1200 BPS
Uplink: 145.8750 MHz AFSK 1200 BPS

[06042009]
=====
PO-28 POSAT-1
Catalog number: 22829
Launch Date: September 25, 1993

Status: Non-operational

Downlink: 429.950
Uplink: Not until handover back to Amatuer usage

Broadcast callsign: POSAT1-11
BBS callsign: POSAT1-12

AMSAT Webpage: http://www.amsat.org/amsat/sats/n7hpr/po28.html
POSAT-1 webpage:
http://www.ee.surrey.ac.uk/SSC/CSER/UOSAT/missions/posat1.html
[01012009]
=====
IO-26 ITAMSAT
Catalog number: 22826
Launch Date: September 26, 1993

Status: PSK carrier only

Current Mode:

Uplinks: 145.875 MHz FM 1200-baud
145.900 MHz FM 1200-baud
145.925 MHz FM 1200-baud
145.950 MHz FM 1200-baud

Downlink: 435.808 MHz PSK

Broadcast Callsign: ITMSAT-11
BBS: ITMSAT-12

Official webpage: http://www.itamsat.org
AMSAT Webpage: http://www.amsat.org/amsat/sats/n7hpr/io26.html
[01212007]
=====
KO-25 KITSAT
Catalog number: 22828
Launch date: September 26, 1993

Status: Non-operational

Uplink: 145.980 MHz FM 9600-baud FSK
Downlink: 436.500 MHz FM

Broadcast Callsign: HL02-11
BBS: HL02-12
[05092004]
=====

AO-24 ARSENE
Catalog Number: 22654
Launch Date: May 13, 1993

Status: Non-operational

Uplink: 435.0625 MHz FM 1k2bps AFSK
435.1125 MHz FM 1k2bps AFSK
435.1375 MHz FM 1k2bps AFSK
Downlink: 145.9750 MHz FM 1k2bps AFSK
2446.5025 MHz FM 1k2bps AFSK

Beacon: 2446.4700 MHz CW

Broadcast callsign:
BBS:
[12162009]
=====
KO-23 KITSAT
Catalog number: 22077
Launch date: August 10, 1992

Status: Non-operational

Uplink: 145.900 MHz FM (9600-baud FSK)
Downlink: 435.170 MHz FM

Broadcast Callsign: HLO1-11
BBS: HLO1-12
[01222007]
=====
UO-22 UOSAT
Catalog number: 21575
Launch date: July 17, 1991

Status: Non-Operational

Uplink: 145.900 FM 9600-baud FSK
Downlink: 435.120 MHz FM

Broadcast Callsign: UOSAT5-11
BBS: UOSAT5-12
[01222007]
=====
AO-21 AMSAT-OSCAR 21
Catalog Number: 21087
Launch Date: January 29, 1991

Status: Non-Operational

Uplink: 435.041 MHz FM DSP
Downlink: 145.983 MHz FM DSP
[01222007]
=====

FO-20 JAS-1b
Catalog number: 20480
Launch Date: February 07, 1990

Status: Non-Operational

Beacons: 435.795 MHz CW
435.910 MHz AX25

Voice Transponder:
Uplink: 145.900 to 146.000 MHz CW/LSB
Downlink: 435.800 to 435.900 MHz CW/USB

Digital Transponder:
Uplinks: 145.850 MHz
145.870 MHz
145.890 MHz
145.910 MHz
Downlink: 435.910 MHz

More FO-20 info can be found at:
http://www.amsat.org/amsat/sats/n7hpr/fo20.html
[01152007]
=====
WO-18 WEBERSAT
Catalog Number: 20441
Launch Date: January 22, 1990

Status: Non-Operational

Downlink: 437.104 MHz SSB 1200 Baud PSK AX.25
[05012006]
=====
DO-17 Dove
Catalog Number: 20440
Launch Date: January 22, 1990

Status: Non-operational.

Downlink: 145.825 MHz FM 1200 Baud AFSK
Beacon: 2401.220 MHz
[05012006]
=====
AO-16 PACSAT
Catalog number: 20439
Launch Date: January 22, 1990

Status: non-operational

Current Mode: V/u

Uplink: 145.900 MHz FM 1200-baud Manchester FSK (reserved)
145.920 MHz FM VOICE
145.940 MHz FM 1200-baud Manchester FSK (reserved)

145.960 MHz FM 1200-baud Manchester FSK (reserved)

Downlink: 437.026 MHz USB VOICE
(1200-baud PSK - MBL Telemetry Only)

Mode-S Beacon: 2401.1428 MHz [NO FUTURE OPERATIONS PLANNED]

Mode and Antenna Polarization:
U: RC 437.050 MHz RHCP
PSK 437.026 MHz LHCP
V: Linear

Broadcast Callsign: PACSAT-11
BBS: PACSAT-12

AO-16 AMSAT Webpage: http://www.amsat.org/amsat/sats/n7hpr/ao16.html
[07242009]
=====
UO-15 UoSAT-4
Catalog Number: 20438
Launch Date: January 22, 1990

Status: Non-operational

Uplink: ?
Downlink: 435.1250MHz (?)
435.1200MHz (?)
[06042009]
=====
UO-14 UoSAT-3
Catalog number: 20437
Launch date: January 22, 1990

Status: Non-operational

Uplink: 145.975 MHz FM
Downlink: 435.070 MHz FM
[05092004]
=====
FO-12 Fuji-OSCAR 12
Catalog Number: 16909
Launch Date: August 12, 1986

Status: Non-Operational

Mode V/U (J) Linear Transponder (Inverting):
Uplink: 145.9000 - 146.0000 MHz SSB/CW
Downlink 435.8000 - 435.9000 MHz SSB/CW

Mode V/U (J) Packet:
Uplink: 145.8500 MHz MFSK 1200 BPS
Uplink: 145.8700 MHz MFSK 1200 BPS
Uplink: 145.8900 MHz MFSK 1200 BPS
Uplink: 145.9100 MHz MFSK 1200 BPS

Downlink 435.9100 MHz PSK 1200 BPS

Telemetry Beacon: 435.7950 MHz SSB/CW
[01152007]
=====
AO-10 OSCAR 10
Catalog number: 14129
Launch Date: June 16, 1983

Status: Non-operational

Uplink: 435.030 to 435.180 MHz CW/LSB
Downlink: 145.975 to 145.825 MHz CW/USB

Beacon: 145.810 MHz (unmodulated carrier)

W4SM has more information about the satellite at the following URL:
http://www.cstone.net/~w4sm/AO-10.html
[05092004]
=====
AO-8 AMSAT-OSCAR 8
Catalog Number: 10703
Launch Date: March 3, 1978

Status: Non-Operational

Mode V/U (J) Linear Transponder (Non-Inverting): Non-Operational
Uplink: 145.9000 - 146.0000 MHz SSB/CW
Downlink 435.1990 - 435.2000 MHz SSB/CW

Mode V/U (J) TLM Beacon: Non-Operational
Downlink 435.0950 MHz CW

Mode V/A (A) Linear Transponder (Non-Inverting): Non-Operational
Uplink: 145.8500 - 145.9000 MHz SSB/CW
Downlink 29.4000 - 29.5000 MHz SSB/CW

Mode V/A (A) TLM Beacon: Non-Operational
Downlink 29.4020 MHz CW
[01152007]
=====
AO-6 AMSAT-OSCAR 6
Catalog Number: 06236
Launch Date: October 15, 1972

Status: Non-Operational

Uplink: 145.9000 - 146.0000 MHz SSB/CW
Downlink: 29.4500 - 29.5500 MHz SSB/CW
Beacons: 29.450 MHz
435.100 MHz
[01312008]
=====
AO-5 Australis-OSCAR 5
Catalog Number: 04321

Launch Date: January 23, 1970

Status: Non-Operational

Telemetry Beacons: 144.0500 MHz CW
29.4500 MHz CW
[01152007]
=====
OSCAR III
Catalog Number: 01293
Launch Date: March 09, 1965

Status: Non-Operational

Uplink: 145.9750 - 146.0250 MHz SSB/CW
Downlink: 144.3250 - 144.3750 MHz SSB/CW
[01012007]
=====
RS-15 RADIO SPORT RS-15
Catalog number: 23439
Launch Date: December 26, 1994

Status: Non-operational

Uplink: 145.858 to 145.898 MHz CW/USB
Downlink: 29.354 to 29.394 MHz CW/USB

Beacon 1: 29.352 MHz (intermittent)
Beacon 2: 29.398 MHz

SSB meeting frequency: 29.380 MHz (unofficial)
[06202004]
=====
RS-13 RADIO SPORT RS-13
Catalog number: 21089
Launch date: February 5, 1991

Status: Non-operational

Uplink: 21.260 to 21.300 MHz CW/USB
Downlink: 145.860 to 145.900 MHz CW/USB

Beacon: 145.860 MHz

Robot: 145.908 MHz
[05232004]
=====
RS-12 RADIO SPORT RS-12
Catalog number: 21089
Launch date: February 5, 1991

Status: Non-operational

Uplink: 21.210 to 21.250 MHz CW/USB
Downlink: 29.410 to 29.450 MHz CW/USB

Beacon: 29.408 MHz

Robot: 29.454 MHz
[05232004]
NNNN
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ANS is released worldwide via the AMSAT ANS e-mail reflector and a live radiocast on the AMSAT-NA 20-meter net held each Sunday on 14.282 MHz. Pre-net operations start at 18:00 UTC, with current ANS bulletins transmitted to the eastern U.S. at 19:00 UTC and to the western U.S. at 19:30 UTC.

Information on AMSAT-NA is available at the following URL:
http://www.amsat.org

Mailing address:
AMSAT-NA
850 Sligo Avenue, Suite 600
Silver Spring, Maryland 20910-4703

Voice: 301-589-6062
888-322-6728
FAX: 301-608-3410

Currently, AMSAT-NA supports the following (free) mailing lists:

* AMSAT News Service (ANS)
* General satellite discussion (AMSAT-BB)
* Orbit data (KEPS)
* Manned space missions (SAREX)
* District of Columbia area (AMSAT-DC)
* New England area (AMSAT-NE)
* AMSAT Educational Liaison mailing list (AMSAT-EDU)
* AMSAT K-12 Educational Liaison mailing list (AMSAT-K12)

A daily digest version is available for each list.

To subscribe, or for more list information, visit the following URL:
http://www.amsat.org/mailman/listinfo/ans

In addition to regular membership, AMSAT-NA offers membership in the President's Club. Members of the President's Club, as sustaining donors to AMSAT Project Funds, will be eligible to receive additional benefits. Application forms are available from the AMSAT-NA Office.

This week's Weekly Satellite Report Editor is James French, W8ISS.

ANS is always dedicated to past ANS editor 'BJ' Arts, WT0N, and to the memory of longtime AMSAT supporters Werner Haas, DJ5KQ, Dennis Kitchen, G0FCL and John Branegan GM4IHJ.

Please send any amateur satellite news or reports to: ans-editor{at} amsat.org
NNNN

/EX

150. ANS-295 AMSAT News Service Weekly Bulletins

Newsgroup: rec.radio.amateur.space
Date: 2012-10-21 01:30:30 UTC
From: JoAnne Maenpaa <k9jkm@comcast.net>
Message-ID: <002001cdaf2a$f3bdc580$db395080$@net>
Source record: 250
Cross-posted to: rec.radio.amateur.space,rec.radio.info

AMSAT NEWS SERVICE
ANS-295

ANS is a free, weekly, news and information service of AMSAT North America, The Radio Amateur Satellite Corporation. ANS reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in designing, building, launching and communicating through analog and digital Amateur Radio satellites.

Please send any amateur satellite news or reports to:
ans-editor at amsat.org

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SB SAT @ AMSAT $ANS-295.01
ANS-295 AMSAT News Service Weekly Bulletins

AMSAT News Service Bulletin 295.01
>From AMSAT HQ SILVER SPRING, MD.
October 21, 2012
To All RADIO AMATEURS
BID: $ANS-295.01

Special Symposium Visitor Hector Martinez, CO6CBF

Hector Martinez, CO6CBF will travel from Cuba to the AMSAT Symposium in Orlando next week. AMSAT extended an invitation for Hector to attend and to make a presentation. Thanks to the work done by Patrick Stoddard, WD9EWK/VA7EWK, Hector has been able to obtain a visa to come to the United States for the Symposium.

Once the invitation was extended, Hector had to approach both governments and file applications to get a Cuban passport and travel permit and a US visa. All expenses for his trip must be guaranteed by someone outside Cuba. Patrick took on that task personally on behalf of AMSAT, even signing legally-binding documents for the Cuban government to that end. Patrick has covered expenses out of his personal funds since no AMSAT funds are available. Patrick would appreciate donations to cover the expenses via his callbook address.

AMSAT looks forward to welcoming Hector, CO6CBF at the Symposium!

[ANS thanks Patrick Stoddard, WD9EWK/VA7EWK and the 2012 Symposium Committee for the above information]

2012 AMSAT Space Symposium Begins This Week in Orlando

This bulletin is a reminder that the time of the 2012 AMSAT Space Symposium is quickly approaching. The Symposium will be held on Friday, October 26th through Sunday, October 28th in Orlando, Florida at the Holiday Inn at Orlando-International Airport.

The Symposium weekend will feature:

+ Space Symposium with Amateur Satellite Presentations
+ Operating Techniques, News, & Plans from the Amateur Satellite World
+ Board of Directors Meeting open to AMSAT members
+ Meet Board Members and Officers
+ Annual General Membership Meeting
+ Annual Banquet-Keynote Speaker and Door Prizes

Symposium Registration including Proceedings
o Starting September 24, 2012: $ 50.00
o At the Door: $ 55.00
o Saturday Evening Banquet $ 45.00
o Sunday Morning Area Coordinators' Breakfast $ 15.00
o Sunday Trip to the Orlando Science Museum - the preregistration for the Star Wars Exhibit has closed; however, access to the rest of the exhibits remains available. Refer to the Museum link on the Symposium Schedule page for tour details.
o Monday (Oct 29) bus trip to KSC and entrance ticket $ 100.00

See the AMSAT Web Store to complete your on-line registration:
http://store.amsat.org/catalog/index.php?cPath=27

Downloadable paper registration forms in MS-Word format and PDF format are available on the 2012 Symposium page:
http://www.amsat.org/amsat-new/symposium/2012/index.php

The hotel offers free Internet connection and free airport shuttle. When you arrive at the Orlando Airport call 407-709-5310 to request the shuttle.

The Orlando International Airport (MCO) is the closest to the Symposium and is served by most major air carriers. The hotel address is: 5750 T.G. Lee Blvd - Orlando, FL 32822. A map link is included on the hotel web page:
http://www.holidayinn.com/hotels/us/en/orlando/mcoap/hoteldetail

Dr. Samuel T. Durrance, NASA Astronaut at the Saturday Evening Banquet
---
The featured speaker for the AMSAT 2012 Saturday Evening Banquet on October 27 will be Dr. Samuel T. Durrance, NASA Astronaut/Payload Specialist and Professor of Physics and Space Sciences at the Florida Institute of Technology. For all the details see:
http://www.amsat.org/amsat-new/symposium/2012/BanquetSpeaker.php

2012 AMSAT Symposium Schedule

To help you plan your trip to Orlando the 2012 Symposium Committee has posted a high-level schedule of the weekend's events.

Thursday 25 October 2012
AMSAT Board of Directors Meeting 8am - 9pm

Friday 26 October 2012
AMSAT Board of Directors Meeting 8am - Noon
Trips to SkyCraft 9am - Noon
AMSAT Symposium 1pm - 5pm

Saturday 27 October 2012
Symposium 8am - 3pm
AMSAT Annual General Meeting 3:30pm
AMSAT Banquet 6:30pm - 10pm

Sunday 28 October 2012
AMSAT Area Coordinator's Breakfast 7:30am
Trip to the Orlando Science Center 9:00am

Monday 29 October 2012
Special trip to Kennedy Space Center 8am-6pm

The AMSAT Symposium Web Schedule Pages include links for details of the activities:
http://www.amsat.org/amsat-new/symposium/2012/SymposiumSchedule.php

[ANS thanks the 2012 Symposium Committee for the above information]

Symposium Speaker and Presentation List is Taking Shape

The Symposium Team is working on finalizing the presentations which are slated to begin at 1:00PM on Friday afternoon, October 26 and run through Saturday, October 27 at 3:00PM.

You will hear from AMSAT's experts on topics including:

+ AMSAT Project Fox
o Program Overview
o Mechanical and Thermal Design
o FoxTLM software
o Linux software build environment for Fox
o Fox radiation mitigation
o The Fox Sniffer

+ Overview of the ARISSat-1 Mission

+ AMSAT and Education
o CubeSat Program Space@VT
o Recent Progress of UCF's CubeSat Program
o High School Students Building Satellites
o AMSAT at PACIFICON 2012

+ Special Presentation by Hector Martinez CO6CBF Working Satellites with a homebrew setup, Cuban Style

+ Future Missions
o Demonstration of MAREA--the Mars-lander ARISS Robotics Exploration Activity
o FUNcube from AMSAT-UK
o FUNcube Dongle
o NASA's Open Source General Mission Analysis Tool

+ Advanced Technology
o Future of CubeSat Communications: Transitioning Away from Amateur Radio Frequencies for High-Speed
o Applying the Codec2 Low-Bitrate Voice Codec to Amateur Satellite Operations

[ANS thanks the 2012 Symposium Committee for the above information]

Successful ARISS Contacts With Youth

Luxembourg

Students from St. George's International School in Luxembourg participated in a Q&A session with Sunita Williams, KD5PLB on Monday, October 8 via an Amateur Radio on the International Space Station (ARISS) contact.

The radio connection was handled by telebridge station W6SRJ in California. Approximately 700 students, teachers and guests were in attendance - 200 in the gym watched live and another 500 in classrooms watched a "live stream" of the contact.

The audience included several VIPs: the UK Ambassador Alice Walpole, the Head Teacher Heather Duxbury and the Deputy Head Teachers (Kath Griffiths and Mark Stenton) of both primary and secondary sections. Guest speakers gave talks on satellites as well as the NASA "Moon Buggie" project. The contact was one of the educational activities

the students from both sections took part in to learn about electricity, astronomy and physics.

Italy

On Tuesday, October 9, Liceo Statale Adelaide Cairoli in Pavia, Italy took part in its Amateur Radio on the International Space Station (ARISS) contact via station W6SRJ in California. On-orbit astronaut Sunita Williams, KD5PLB, was able to answer 18 questions during the contact as nearly 1100 students gathered for the event.

The school uses amateur radio as a teaching tool and its radio club provides students the opportunity to speak with other amateurs all over the world using different languages. This ARISS contact was used to focus on technology, science and foreign languages. The video may be viewed here: http://livestre.am/4aJ08

Successful PACIFICON ISS contact

An Amateur Radio on the International Space Station (ARISS) contact was held with youth attending the American Radio Relay League (ARRL) Pacific Division annual convention, PACIFICON in Santa Clara, California on Saturday, October 13.

Telebridge station IK1SLD in Italy provided the radio connection.

Astronaut Akihiko Hoshide, KE5DNI, on the ISS participated in the contact which was the featured event of the PACIFICON Youth Program that emphasized hands-on radio operation, electronics kit building, orbital mathematics and CubeSat satellite design, among other STEM activities.

Fellow astronaut Dr. Lee Morin gave a presentation at the event and exchanged greetings with Hoshide at the end of the ISS pass.

An audience of approximately 150 was present for the contact; 2500 attended the convention.

[ANS thanks Carol Jackson, KB3LKI for the above information]

AO-27 Recovery Work Still in Progress

AO-27 Command Station Michael Wyrick, N3UC reported on the team's to recover the satellite and return its FM repeater back to service after it stopped responding on October 5.

The next day AO-27 was restored back to running on its primary Bootloader. Control operators were able to turn on the Transmitter for a short time. The command team downloaded the memory dump between October 8-12 to try to determine the cause of the failure. This was slowed due to interference. Please, if you can't hear the bird in Analog mode, please don't transmit to it.

On October 14 the command team recovered from the AFSK modem problem which was one of the initial symptoms of the problems. They were able to upload the entire kernel. As of October 15 they finished uploading the high level code to AO-27. The TOPR schedule will be on digital for the entire pass until the command team collects enough telemetry and finishes the on-orbit checkout.

AO-27 crashed once again on October 16. The command team once again recovered to the bootloader state, recovered from another occurrence of the AFSK modem problem and once again is attempting another software upload.

ATTENTION OPERATORS: To prevent interfering with the command team's recovery efforts, if you can't hear AO-27 in Analog mode, please don't transmit to it.

The latest AO-27 news is posted on its webpage:
http://www.ao27.org/AO27/index.shtml

Mode V/U (J) FM Voice Repeater Frequencies

Uplink 145.8500 MHz FM
Downlink 436.7950 MHz FM

[ANS thanks AO-27 Command Station Michael Wyrick, N3UC for the above information]

JA0CAW Receives 5840.0 MHz Downlink From FITSAT-1

Tetsurou Satou, JA0CAW, successfully received the 5840.0 MHz downlink from FITSAT-1 while it orbited over Japan. FITSAT-1, was one of five CubeSats deployed from the International Space Station on October 4.

He used a 38cm dish with a down-converter to an IF of 1284 MHz, a BGA2717 LNA and the AMSAT-UK FUNCube Dongle SDR with HDSDR software.

Visit the AMSAT-UK web to view the JA0CAW posted:
http://www.uk.amsat.org/?p=11100

[ANS thanks Tetsurou Satou, JA0CAW for the above information]

CAMSAT Announces New Details of CAS-2 Amateur Satellite Mission

First announced at the Friedrichshafen Ham Radio 2012 event, the Chinese Amateur Satellite Group (CAMSAT) has made additional information available on the new CAS-2 satellite under development. The latest news has been posted by AMSAT-UK:
http://www.uk.amsat.org/?p=11108

CAMSAT is building two micro-satellites CAS-2A1 and CAS-2A2 to be combined into a binary star system for amateur radio communication

and education.

There will be a radio link between two satellites when the satellites are in suitable positions in their orbits, so that the amateur radio communication coverage can be extended. Both spacecraft are 25kg 270x270x250mm and are planning to launch from Taiyuan into a sun synchronous, 1000km apogee, 99.5 degree orbit.

Missions of CAS-2A1 satellite:
+ 145 MHz CW telemetry beacon 100mW
+ 145 MHz AX.25 digital telemetry beacon 500mW
+ 145 MHz FM voice beacon 500mW
+ 435/145 MHz mode Linear transponder 50 kHz 500mW
+ 1260/2400 MHz Linear transponder 200 kHz 320mW
+ 435/145 MHz APRS repeater

Missions of CAS-2A2 satellite:
+ 435 MHz CW telemetry beacon 100mW
+ 435 MHz AX.25 digital telemetry beacon 500mW
+ 2400 MHz CW telemetry beacon 200mW
+ 10450 MHz CW telemetry beacon 200mW
+ 145/435 MHz Linear transponder 500mW

[ANS thanks CAMSAT and AMSAT-UK for the above information]

AMSAT-LU Recovers Stratospheric Balloon

AMSAT-LU launched their LUSEX high altitude balloon from La Pampa, Argentina on May 19, 2012. The payload included a UHF to VHF (4w) subtone activated repeater, APRS lu7aa-11, Robot-36 live SSTV, CW, 40/20m CW tlm beacon and two video cameras. Over 200 stations made contacts through the repeater during the 4 hour flight that reached 34,000 meters, 111,548 feet.

Initially thought lost during descent the payload was recovered on October 6 from a muddy, flooded and isolated area by 4x4 Adventure Group. Video and sound taken by two on board TV Cameras spanned 6 hours. They can be viewed at: http://tinyurl.com/AMSAT-LU

Details of the LUSEX Experiment, part of Amsat-LU development and field tests of AMSAT Argentina's planned LUSEX satellite are posted at: http://www.lusex.org.ar. See http://www.amsat.org.ar/rescate.jpg for additional photos.

Pending approval and flight authorization by Argentina Federal Aviation Authorities AMSAT-LU plans another balloon flight during the November-December timeframe.

AMSAT-UK posted a related story at: http://www.uk.amsat.org/?p=11094 with videos and photos from the flight.

[ANS thanks AMSAT Argentina for the above information]

NASA Announcement of (Suborbital) Flight Opportunities #6 Now Open

While AMSAT generally seeks orbital flight opportunities, this NASA announcement for access to flights on parabolic flights, suborbital Reusable Launch Vehicles (sRLV), and high-altitude balloons may be of interest to our allied university groups.

The National Aeronautics and Space Administration (NASA) Dryden Flight Research Center has released a solicitation entitled "NASA Announcement of Flight Opportunities (AFO) for Payloads Maturing Crosscutting Technologies that Advance Multiple Future Space Missions to Flight Readiness Status."

These NASA flight opportunities are for payloads that seek to gather information required for the design, development and refinement of new technologies. For instance, such information could concern how certain fluids phenomena behave, how thermal transport changes, or how human physiology is altered under microgravity.

The full document and program details are posted on NASA's NSPIRES (NASA Solicitation and Proposal Integrated Proposal and Review System): http://tinyurl.com/NASA-nspires and then select the "Announcement of Flight Opportunities (AFO) - #6" link.

Applications are due on or before 11:59 PM Eastern Time December 21, 2012, and selections will be announced in a target timeframe of February 2013.

[ANS thanks NASA for the above information]

NASA History Program Office Spring and Summer 2013 Internships

The NASA History Program Office is seeking undergraduate and graduate students for spring and summer 2013 internships. The History Program Office maintains archival materials to answer research questions from NASA personnel, journalists, scholars, students at all levels and others from around the world. The division also edits and publishes several books and monographs each year. It maintains a large number of websites on NASA history.

Students of all majors are welcome to apply. While detailed prior knowledge of the aeronautics and space fields is not necessary, a keen interest and some basic familiarity with these topics are needed. Strong research, writing and editing skills are essential. Experience with computers, especially hypertext markup language, or HTML, formatting, is a plus.

Intern projects are flexible. Typical projects include handling a variety of information requests, editing historical manuscripts, doing research and writing biographical sketches, updating and creating websites, and identifying and captioning photos.

Applications for spring 2013 internships are due Oct. 30, 2012.
Summer 2013 internship applications are due Feb. 4, 2013.

For more information, visit http://history.nasa.gov/interncall.htm.

If you have questions about this opportunity, please contact
Bill Barry at bill.barry@nasa.gov.

[ANS thanks NASA Education Express Message -- Oct. 18, 2012 for the above information]

Iran Capable of Launching Satellites Weighing Below 10kg

An article appearing on SpaceDaily.com says that, "MICROSAT BLITZ Iran capable of launching nano-satellites weighing below 10 kg: official", by Staff Writers Tehran (XNA) Oct 19, 2012

Source: http://tinyurl.com/SpaceDaily-Iran (SpaceDaily.com)

Iran Space Agency (ISA) Director Hamid Fazeli said the Islamic republic has the capability to launch nano-satellites weighing below 10 kg into space, Tehran Times daily reported Thursday.

Some of Asian countries and an Austrian university have announced readiness to set their satellites into orbit using Iranian space shuttles, Fazeli was quoted as saying.

He said Iran is among a handful of countries in the world that are capable of developing satellite-related technologies.

In February, Iran launched an observation satellite into orbit. The spacecraft, named Navid (Herald), weighed 50 kg and could take pictures in low attitudes of about 250 km to 375 km from the earth.

Iran, a founding member of the United Nations Committee on the Peaceful Uses of Outer Space, launched its first domestically-made data-processing satellite, the Omid (Hope), into space in 2009.

[ANS thanks SpaceDaily.com for the above information]

Satellite Shorts From All Over

+ ISS orbital reboost planned. The thrusters of the Russian Zvezda service module are planned to be fired for 19 seconds on Wednesday to raise the station's average orbit altitude by one kilometer to 436 km (270.9 miles). The reboost is in preparation for the docking of the Soyuz TMA-06M manned spacecraft with Russian cosmonauts Oleg Novitsky and Yevgeny Tarelkin, and NASA astronaut Kevin Ford planned to be launched on October 25.

+ On Wednesday, October 10 it was announced in Moscow that UK private spacefarer Sarah Brightman had passed the required mental and physical examinations to fly into space. In 2013 she will undertake six months of training at Star City in Moscow in preparation for her mission to the International Space Station. Read the entire post at: http://www.uk.amsat.org/?p=11034

+ Bob McGwier, N4HY says that the Hume Center for National Security and Technology, and the Bradley Department of Electrical and Computer Engineering at Virginia Tech, are seeking applicants for junior and mid-level research staff members to support a growing body of research programs in signals intelligence, military communications, and electronic warfare. Details are posted at: http://listings.jobs.vt.edu/applicants/Central?quickFind=196236

+ In HamRadioNow.tv, Episode 27, Gary Pierce, KN4AQ interviewed Bill Brown, WB8ELK, who sends balloons carrying ham radio to the edge of space, and David Stephenson KJ4OKJ who launches rockets with NASA. Watch the podcast: http://arvideonews.com/hrn/HRN_Episode_0027.html Additional programs can be found at: http://HamRadioNow.tv

+ Learn some Finnish as you watch a video from Kauto, OH2LFM with OH2AUE demonstrating a P3E transponder at SRAL summer camp: http://tinyurl.com/OH-transponder

+ Watch a video (http://www.uk.amsat.org/?p=11061) by students from the Univeristy of Manitoba showing what is involved in assembling a Nanosatellite. T-Sat1 will use the 145 and 437 MHz amateur radio bands.

+ Lots of good VHF information plus the Updated VE7BQH VHF Antenna Comparison Tables is found at: http://www.bigskyspaces.com/w7gj/

+ In celebration of Britain's contributions to space discovery and exploration, Royal Mail is issuing a set of six special stamps to mark the 50th anniversary of Britain's first launch into the final frontier. Read the details posted at: http://spaceref.com/news/viewpr.html?pid=38911

+ Ride along with Endeavour in Los Angeles on its way to museum duty in a time lapse compilation by photographer/cinematographer Matthew Givot: http://vimeo.com/51621640

+ The next Hudson Valley Satcom net date is Thursday, October 25 at 8 PM EDT (UTC-4 UTC) on the 146.97 MHz MBARC Repeater (PL 100). An echolink connection is available on the N2EYH-L node. More information at: http://www.hvsatcom.org. (Stu, WA2BSS)

[ANS thanks everyone for the above information]

/EX

In addition to regular membership, AMSAT offers membership in the President's Club. Members of the President's Club, as sustaining donors to AMSAT Project Funds, will be eligible to receive additional benefits. Application forms are available from the AMSAT Office.

Primary and secondary school students are eligible for membership at one-half the standard yearly rate. Post-secondary school students enrolled in at least half time status shall be eligible for the student rate for a maximum of 6 post-secondary years in this status. Contact Martha at the AMSAT Office for additional student membership information. And with that, please keep in mind the tale of the ham who went to his dentist to see why his dentures kept decaying rapidly. The dentist looked at the hams's dentures and remarked, "This is very odd. They look like something's been eating them. Is there anything different that you've been eating lately?" The ham said, "Well, my wife has been making a lot of eggs Benedict recently with hollandaise sauce." "Ah!" exclaimed the dentist, "That's it. I know just what you need. I'm going to order you some new dentures with plates made out of chrome." "Chrome?" exclaimed the ham incredulously, "Why Chrome?" The dentist replied, "Because, there's no plates like chrome for the hollandaise."

73,
This week's ANS Editor,
JoAnne Maenpaa, K9JKM

151. claudia lizaldi maxim

Newsgroup: rec.radio.amateur.space
Date: 2012-10-22 13:24:42 UTC
From: Iran <tamarmadgecay@gmail.com>
Message-ID: <b8b013de-1729-4726-9f76-2178616c97ca@googlegroups.com>
Source record: 51

claudia lizaldi maxim http://www.google.com/search?hl=en&q=claudia+lizaldi+maxim+site:bonhskh168.blogspot.com&btnI=I%27m+Feeling+Lucky

152. Weekly Highlights of Solar and Geomagnetic Activity, 15 - 21 October 2012

Newsgroup: rec.radio.amateur.space
Date: 2012-10-22 15:30:07 UTC
From: SWPC.Webmaster@noaa.gov
Message-ID: <20121022153001.EAA4933C9C@panix2.panix.com>
Source record: 52
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.dx,rec.radio.amateur.space,rec.radio.shortwave,rec.radio.info

:Product: Weekly Highlights and Forecasts
:Issued: 2012 Oct 22 0609 UTC
Prepared by the US Dept. of Commerce, NOAA, Space Weather Prediction Center
Product description and SWPC contact on the Web
http://www.swpc.noaa.gov/weekly.html
#
Weekly Highlights and Forecasts
#
Highlights of Solar and Geomagnetic Activity
15 - 21 October 2012

Solar activity ranged from low to high levels. Activity was low during 15 - 19 October due to mostly low-level C-class flares. The largest flare of this interval was a C7 at 17/0802 UTC from Region 1596 (N07, L=150, class/area Eho/460 on 21 October) which displayed a beta-gamma magnetic configuration during most of its transit. Activity increased to high levels on 20 October due to an impulsive M9 x-ray flare at 20/1814 UTC from Region 1598 (S12, L=113, class/area Dhi/270 on 21 October) as it crossed the east limb. The M9 flare was associated with a Type II radio sweep (estimated shock speed 516 km/s) and a non-Earth-directed coronal mass ejection (CME). Activity decreased to moderate levels on 21 October due to an M1/Sf flare at 21/2003 UTC from Region 1598, which was also associated with a non-Earth-directed CME.

No proton events were observed at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit was at high levels during most of the period.

Geomagnetic field activity was at unsettled levels early on 15 October, then decreased to quiet levels for the rest of the period.

Forecast of Solar and Geomagnetic Activity
22 October - 17 November 2012

Solar activity is expected to be at low to moderate levels during 22 October - 02 November with M-class flare activity likely from Region 1598. Activity is expected to decrease to low levels during 03 - 17 November. However, there will be a chance for M-class flare activity beginning 15 November as (old) Region 1598 returns to the visible disk.

No proton events are expected at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit is expected to be at mostly high levels during 22 - 24 October. A decrease to normal to moderate flux levels is expected during 25 October - 04 November. An increase to mostly high flux levels is expected during 05 - 17 November.

Geomagnetic field activity is expected to be at quiet to unsettled levels during 22 - 23 October with a slight chance for active levels due to a coronal hole high-speed stream (CH HSS). Quiet levels are expected during 24 October - 07 November. An increase to unsettled levels is expected on 08 November due to a solar sector boundary passage followed by a co-rotating interaction region in advance of a CH HSS. A further increase to active to minor storm levels is expected on 09 November due to the onset of a CH HSS. Activity is expected to decrease to quiet to active levels on 10 November as CH HSS effects subside. A further decrease to quiet levels is expected during 11 - 17 November.

153. Weekly Highlights of Solar and Geomagnetic Activity, 22 - 28 October 2012

Newsgroup: rec.radio.amateur.space
Date: 2012-10-29 15:30:08 UTC
From: SWPC.Webmaster@noaa.gov
Message-ID: <20121029153002.442CB33C52@panix2.panix.com>
Source record: 53
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.dx,rec.radio.amateur.space,rec.radio.shortwave,rec.radio.info

```
:Product: Weekly Highlights and Forecasts
:Issued: 2012 Oct 29 0547 UTC
# Prepared by the US Dept. of Commerce, NOAA, Space Weather Prediction Center
# Product description and SWPC contact on the Web
# http://www.swpc.noaa.gov/weekly.html
#
# Weekly Highlights and Forecasts
#
Highlights of Solar and Geomagnetic Activity
22 - 28 October 2012

Solar activity ranged from low to high levels. Activity was high
during 22 - 23 October due to two major flares from Region 1598
(S11, L=113, class/area Dki/420 on 23 October). The first was an
impulsive M5/1f at 22/1851 UTC and the second was an impulsive X1 at
23/0317 UTC associated with a Type II radio sweep and a 620 sfu
Tenflare. Region 1598 displayed a delta magnetic configuration
within its trailer spots during 23 - 27 October. It showed gradual
trailer spot decay beginning 24 October. Activity dropped to low
levels during 24 - 28 with low-level C-class flares, most of which
were from Regions 1598 and 1594 (S26, L=200, class/area Dao/090 on
16 October). Two Earth-directed coronal mass ejections (CMEs)
occurred on 27 October. The CMEs were closely spaced in time and
appeared to be associated with a B9/Sf flare at 27/1235 UTC from
Region 1598.

No proton events were observed at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit was at
high levels during most of the period with moderate levels observed
on 27 October.

Geomagnetic field activity was at quiet levels throughout the
period.

Forecast of Solar and Geomagnetic Activity
29 October - 24 November 2012

Solar activity is expected to be low during the period with a slight
chance for M-class flares during 29 October - 02 November and 15 -
24 November.

No proton events are expected at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit is
expected to be at normal to moderate levels during 29 October - 04
```

November. High flux levels are expected during 05 - 24 November.

Geomagnetic field activity is expected to be at quiet levels during 29 - 30 October. An increase to quiet to unsettled levels is expected late on 31 October, with a chance for active levels, due to the arrival of the CMEs observed on 27 October. A further increase to active levels is expected on 01 November, with a chance for minor storm periods, as CME effects continue. Field activity is expected to decrease to unsetttled to active levels on 02 November as CME effects gradually subside and a coronal hole high-speed stream (CH HSS) begins to disturb the field. Activity is expected to decrease to quiet to unsettled levels on 03 November as CH HSS effects subside. Quiet conditions are expected during 04 - 07 November. An increase to unsettled levels is predicted for 08 November, due to a solar sector boundary crossing followed by a co-rotating interaction region in advance of a CH HSS. A further increase to active levels is expected on 09 November, with a chance for minor storm periods, due to a CH HSS. Activity is expected to decrease to quiet to active levels on 10 November as CH HSS effects subside. Quiet levels are expected during 11 - 24 November.

154. cock hungry college girls

Newsgroup: rec.radio.amateur.space
Date: 2012-10-30 16:16:52 UTC
From: Iran <tamarmadgecay@gmail.com>
Message-ID: <2854e3a3-2337-4120-b604-da38ef203f4f@googlegroups.com>
Source record: 54

cock hungry college girls http://www.google.com/search?hl=en&q=cock+hungry+college+girls+site:gmquckbor972.blogspot.com&btnI=I%27m+Feeling+Lucky

155. audrey savannah foursome

Newsgroup: rec.radio.amateur.space
Date: 2012-10-31 13:39:23 UTC
From: Iran <tamarmadgecay@gmail.com>
Message-ID: <0477b602-aded-488a-a5aa-db8c01dca0a2@googlegroups.com>
Source record: 55

audrey savannah foursome http://www.google.com/search?hl=en&q=audrey+savannah+foursome+site:vladlenaivfun.blogspot.com&btnI=I%27m+Feeling+Lucky

156. Crossposting Permitted to rec.radio.amateur.moderated

Newsgroup: rec.radio.amateur.space
Date: 2012-11-01 06:00:02 UTC
From: rram@panix.com
Message-ID: <radio/ham-radio/moderated/crossposting-1-1351749600@panix.com>
Source record: 56
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space,rec.radio.info

```
Posted-By: auto-faq 3.3.2 beta (PGPMoose V2.0, Perl 5.005)
Archive-name: radio/ham-radio/moderated/crossposting
Revision: 1.2 2011/11/02 04:08:53
Posting-Frequency: posted twice monthly
URL: http://www.panix.com/~rram/usenet/rram/index.html

Changes followed by "|".

After a 30-day public discussion and feedback period to gauge reader
opinions in March of 2009:

http://groups.google.com/group/rec.radio.amateur.moderated/browse_thread/thread/d7d337db35
f23326

the rec.radio.amateur.moderated Moderation Team had decided to consider |
amending its charter, and permit limited simultaneous crossposting to
rec.radio.amateur.moderated and one other unmoderated
amateur-radio-related discussion newsgroup. After a successful trial |
period (90 days, through early July 2009), we decided to adopt this |
change permanently. |

Approved rec.radio.amateur.* newsgroups are those that are currently
listed in the latest version of the "List of Big Eight Newsgroups" which
is crossposted monthly to news.announce.newgroups, news.groups, and
news.lists.misc.

Approved alt.radio.amateur.* and alt.ham-radio.* newsgroups are those
that have been created consistent with the suggestions in "So You Want
to Create an Alt Newsgroup" at:

http://www.faqs.org/faqs/alt-creation-guide/

Approved regional hierarchy newsgroups are those that contain either
"radio.amateur" or "ham-radio" in their names, including
uk.radio.amateur and aus.radio.amateur.misc.

We will make every reasonable effort to keep our list of approved
newsgroups up-to-date. In case we have overlooked any, and a submission
is rejected in error as a result, the rejected submitter can E-mail us
at our administrative contact address (in the signature at the bottom of
this article, and the default Reply-To for the rejection message)
requesting that it be added, and that the article be approved. We may
still choose to reject articles crossposted to any alt.* newsgroup with
an inappropriate name, including obscene language, embedded
name-calling, or encouragement of unlawful conduct.
```

Please direct any comments, questions, or criticisms to
rec-radio-amateur-moderated-request@panix.com.

157. ANS-309 AMSAT News Service Weekly Bulletins

Newsgroup: rec.radio.amateur.space
Date: 2012-11-04 02:22:15 UTC
From: JoAnne Maenpaa <k9jkm@comcast.net>
Message-ID: <001c01cdba33$2b2313f0$81693bd0$@net>
Source record: 57
Cross-posted to: rec.radio.amateur.space,rec.radio.info

AMSAT NEWS SERVICE
ANS-309

ANS is a free, weekly, news and information service of AMSAT North America, The Radio Amateur Satellite Corporation. ANS reports on the activities of a worldwide group of Amateur Radio operators who share an
active interest in designing, building, launching and communicating through analog and digital Amateur Radio satellites.

Please send any amateur satellite news or reports to:
ans-editor at amsat.org

In this edition:

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* NASA Offers Spot The Space Station Service Via Text or E-mail
* Satellite Shorts From All Over

SB SAT @ AMSAT $ANS-309.01
ANS-309 AMSAT News Service Weekly Bulletins

AMSAT News Service Bulletin 309.01
>From AMSAT HQ SILVER SPRING, MD.
November 4, 2012
To All RADIO AMATEURS
BID: $ANS-309.01

President's Update Given at AMSAT-NA Annual Meeting in Orlando

AMSAT President Barry Baines, WD4ASW gave a presentation to members at the 30th Space Symposium and Annual General Meeting in Orlando, Florida on Saturday, October 27.

Barry noted the significant strides AMSAT has accomplished in the area of education outreach reflected by the appointment of Mark Hammond, N8MH, as AMSAT's VP-Educational Relations. Over the past year

Mark has been developing a team to enhance our capabilities in this area and worked with the ARRL to develop new approaches to STEM education that will translate into future opportunities in space.

Barry provided a summary of additional accomplishments for 2012:

+ Fox selection by NASA for an ELaNa Launch based on our STEM educational activities.

+ The Fox-1 project is on schedule planning for launch in the 2nd half of 2013.

+ The Engineering Team has developed a capable and motivated staff.

+ Evolving partnerships for future launch opportunities are under way.

+ AMSAT has continued to deal with ITAR issues. The publication of the Fox design in the Symposium Proceedings book opens the path to placing the work in the public domain which is expected to relieve many ITAR issues going forward.

+ Appointment of Frank Bauer, KA3HDO as VP-Human Spaceflight will allow AMSAT to develop additional opportunity in this area.

+ Implementation of the new ARISS school selection process.

+ Re-establishment of the AMSAT store on-line.

+ Steps are being taken to revive the AMSAT Journal. Appointment of JoAnne Maenpaa, K9JKM as the new Editor.

+ ANS is a world-class distributor of information about amateur radio in space. One new ANS Editor has joined the weekly rotation with openings for additional volunteers.

Many details of AMSAT's future partnerships for launch opportunities will be published in the AMSAT Journal. A link to the President's Report will be added to our http://www.amsat.org web page.

[ANS thanks AMSAT President Barry Baines, WD4ASW for the above information]

Update on AO-27 Recovery Work

AO-27 Command Station Michael Wyrick, N3UC provides updates on the team's attempts to recover the satellite on their web page. They are working to return AO-27's FM repeater back to service after it stopped responding on October 5.

In early October AO-27 was restored back to running on its primary Bootloader. Control operators were able to turn on the Transmitter for a short time on several occasions. Also required were multiple recoveries the stuck AFSK modem which was one of the initial symp-

toms of the problems.

During recovery efforts AO-27 crashed once again on October 16. The command team once again recovered to the bootloader state, recovered from another occurrence of the AFSK modem problem and once again performed another software upload.

On October 18 the transmitter was left ON in an attempt to discharge the batteries with the hope that faults could be cleared. Once the battery was recharged last week the high-level EOS software aboard AO-27 ran for a few seconds before locking up. The team was able to reset it back to the bootloader. Dumps indicate it is locking up while fetching telemetry from the hardware. Michael, N3UC, wrote, "It does not look like there will be a quick resolution to this crash."

ATTENTION OPERATORS: To prevent interfering with the command team's recovery efforts, if you can't hear AO-27 in Analog mode, please don't transmit to it.

The latest AO-27 news is posted on its webpage:
http://www.ao27.org/AO27/index.shtml

Mode V/U (J) FM Voice Repeater Frequencies

Uplink 145.8500 MHz FM
Downlink 436.7950 MHz FM

[ANS thanks AO-27 Command Station Michael Wyrick, N3UC for the above information]

Successful ARISS School Contacts

Japan

Meikei High School in Tsukuba, Japan participated in an Amateur Radio on the International Space Station (ARISS) contact on Tuesday, October 23. Students from the science club, who are studying orbital mechanics and amateur radio satellite communications, used their own radio station, JJ1YAF to make the call to on-orbit astronaut Akihiko Hoshide, KE5DNI, an alumnus of the school. The contact was conducted in Japanese. Approximately 60 people were in attendance and media coverage included 4 newspapers as well as the Japan Broadcasting Corporation, NHK.

Massachusetts

On Friday, October 26, students from East Falmouth Elementary School in East Falmouth, Massachusetts took part in a successful Amateur Radio on the International Space Station (ARISS) contact with Sunita Williams, KD5PLB. Students asked 18 questions concerning what it is like to live in space and the experiments conducted on the Space Sta-

tion. The contact was integrated into science lessons about the solar system, global climate changes on Earth and the advances in science and technology generated by space exploration. Over 100 students and guests were in attendance and reporters from two newspapers were present. Video of the event is posted at: http://tinyurl.com/ARISS-Falmouth (YouTube)

Three Successful ARISS Contacts on October 30

South Florida Science Museum (SFSM), West Palm Beach, Florida had a successful Amateur Radio on the International Space Station (ARISS) contact on Tuesday, October 30. SFSM and the West Palm Beach Amateur Radio Club, WPBARC, which maintains a radio station within the museum, worked with area teachers to provide educational content to students emphasizing NASA, the ISS and amateur radio. Read the details of the wide media coverage of this event as reported in ANS-302: http://amsat.org/pipermail/ans/2012/000661.html

An Amateur Radio on the International Space Station (ARISS) contact was successful with the Southern Tier Catholic and Archbishop Walsh Academy, Olean, New York on Tuesday, October 30 via telebridge station IK1SLD in Italy. The contact was part of a comprehensive education curriculum which will pique students' interest in Science, Technology, Engineering and Mathematics (STEM).

Cumberland Elementary School, West Lafayette, Indiana had a successful Amateur Radio on the International Space Station (ARISS) on Tuesday, October 30. The contact was integrated into a curriculum covering topics on space research, robotics and engineering. Other activities planned include night sky observations, model rocketry and electrical circuit projects.

[ANS thanks Carol, KB3LKI, and the Amateur Radio on the International Space Station (ARISS) Status Report for the above information]

Flabob Airport Preparatory Academy ARISS Contact Wins PR Award

As Clint Bradford, K6LCS of Jurupa Valley said, "It was 13 months of planning for 10 minutes of conversation, but, oh!, what a conversation!"

"'LIVE! [illegible] from outer space!' Students speak to an astronaut in the orbiting International Space Station" was the special event on April 19, 2012 that earned an award for Karen and Clint Bradford in annual competition by the Public Relations Society of America. The event was planned for the 120 students of Flabob Airport Preparatory Academy and more than 80 parents, community leaders, media representatives and interested persons.

Clint initiated the event because of his hobby in ham radio and volunteer position with NASA through Amateur Radio on the International Space Station (ARISS): He provides school technical support for students in North America to talk to astronauts aboard the orbiting space station. NASA's "Teaching from Space" program is available to any school that applies, but the typical wait-time from application to event is three years.

He approached Kathy Rohm, vice president and director of community relations at Flabob Airport Preparatory Academy, which is supported by the Tom Wathen Center. She was enthusiastic to sponsor the literally out-of-this-world, once-in-a-lifetime special event to inspire students. More than 2,900 emails flew between Clint, Kathy, NASA, Flabob staffer Nina Bentham and ARISS volunteers to produce the event.

NASA-Houston flight director Phil Engelauf, who grew up in Rubidoux and whose mother, Beverly, still lives here, was invited to the event.

His duties prevented him from attending, but he sent warm regards to the students in a special message that is posted at the event's Web site - http://iss-flabob.com (on the blog).

The event went according to plan, except for a momentary glitch with audio quality, despite having tested the system for three days preceding the event. Clint quickly figured out a solution, although he later said that he was only 90 seconds from NASA terminating the call if he had not succeeded.

"When we looked around the hangar at the conclusion of the contact, hearing the students' whoops of happiness, we saw more than a few adults wiping at their eyes us included," Karen said. "We felt intensely rewarded to think how our students may feel throughout their lives when they look up in the sky and remember the thrilling day when Flight Engineer Don Pettit answered their questions."

Student Brittany Cain had asked, "Besides missing your family and friends, what is the biggest adjustment you have made for this mission?" The assembled group laughed when Pettit replied he missed not being able to take a bath for six months!

The mission of Flabob Airport Preparatory Academy is to use aviation as a tool to motivate students to achieve their personal, academic, and career goals.

Current statistics reveal that American students severely lag behind their foreign peers: In a study of 31 countries, the Organization for Economic Cooperation and Development ranked Americans 21st in science and 25th in math. Consequently, President Obama launched the Educate to Innovate Campaign in 2009 to unite teachers, parents, businesses and students toward excellence in STEM (science, technology, engineering and math) studies.

Karen is a current member and past president of PRSA's California Inland Empire Chapter. There are more than 80 local members.

[ANS thanks the Public Relations Society of America and Clint Bradford, K6LCS for the above information]

Hurricane Damage Delays First Cuba National Satellite Meeting

The first National Meeting of Cuba's new "Grupo de Radioaficionados para Operaciones Satelitales", GROS which was scheduled for November 8-11 has been delayed due to the severe impact caused by Hurricane Sandy last week to the eastern provinces of Cuba. Raydel Espinet CM2ESP reports the meeting will now be delayed to January, 2013.

The Meeting location at Camag"ey did not receive any damage but the provinces of "Santiago de Cuba", "Holgu"n" and "Guant"namo" were bad-
ly affected and many houses, schools and factories loss their roofs or were damaged by fallen trees. Several ham radio operators lost their houses.

Most of the state resources are now been prioritized to assist to the people of this three provinces that lost their houses. Under this circumstances we were asked to reschedule the National Meeting and the Coordination Board agreed with the request as a solidarity to our colleagues.

Many other activities the National Amateur Radio Federation (F.R.C.) had scheduled were also postponed included its National Council.

We are working on possible dates not sooner than January. We sorry for all of the inconvenience and the G.R.O.S. Coordination Board (Grupo de Radioaficionados para Operaciones Satelitales) will ann-
ounce the new date when possible.

We still have great hopes with this First Meeting and during this extra months we will work harder to improve our work and make it better.

When the meeting convenes there are plans for a special callsign T47G, which will be active every day on HF and satellites, in the grid FL11. There are 4 conferences, 4 workshops, 1 exposition and as many demonstrations as passes currently scheduled.

In the meantime the G.R.O.S VHF FM Net devoted entirely to the Ama-
teur Radio Satellites continues to meet on 145.550 MHz. The net will be on the air every Friday from 19:00 to 20:00 local time in Havana. CM2ESP is the Net Control Station.

They are looking forward to hear about Hector"s (CO6CBF) experience and stories about his participation in the AMSAT Symposium in Orlando during this First Meeting. The Group also wants to thanks to Patrick, WD9EWK, and all the people at AMSAT for their very important support to Hector. We want to send a big congrats to Hector too.

[ANS thanks GROS Coordinator Raydel Abreu Espinet, CM2ESP for the above information]

Special Symposium Visitor Hector Martinez, CO6CBF Back Home

Hector Martinez, CO6CBF traveled from Cuba to the AMSAT Symposium in Orlando last week. AMSAT had extended an invitation for Hector to attend and to make a presentation. Thanks to the work done by Patrick Stoddard, WD9EWK/VA7EWK, Hector was able to obtain a visa to come to the United States for the Symposium.

Patrick, WD9EWK posted an update, "On my way home from the airport, I called Hector. He made it home OK, and is now in the process of clearing the gear he brought back from Florida through the processes of Cuban Customs and the Cuban communications ministry. This is normal, and he was confident he could get everything cleared without incident. Hector also said he hopes to be able to post a message to thank everyone that helped make his trip to Florida possible."

Patrick says he incurred expenses related to bringing Hector to the Symposium totaling $2413.30. Upon returning home he found he has received contributions totaling $1960.00 for the "Hector fund". He wrote, "If there are other contributions in the mail, I will add that to my spreadsheet and post an update later. I don't think I will need any other contributions toward this effort. THANK YOU ALL!"

Video of Hector's presentation at the Symposium, "Working Satellites With a Homebrew Setup, Cuban Style" is posted on-line at: http://www.youtube.com/watch?v=cmIubIBQ4

Hector, CO6CBF wrote, "It was a wonderful trip! Thanks very much to everyone who helped to come true this wonderful dream. I will never forget your help, solidarity and good wishes on this long process. I really appreciate it! My special thanks to the AMSAT Board of Directors and to Patrick WD9EWK who did an exceptional job on this process. The amateur radio by satellites is more than interchange gird locators; the AMSAT community is like a big family. Thanks very much again."

[ANS thanks Patrick Stoddard, WD9EWK/VA7EWK and Hector, CO6CBF for the above information]

F-1 Amateur Radio CubeSat Update

News posted on the AMSAT-UK web reports Thu Trong Vu XV9AA has provided this update on F-1:

The attempts to recover the CubeSat are now focusing on reception of the backup UHF FM channel 437.485 MHz (+/-10 kHz Doppler shift). This FM beacon should transmit Morse Code for 20 seconds every min-

ute during daylight.

The team would appreciate any reports of the beacon which can be sent to Thu Trong Vu XV9AA at thuvt@fpt.edu.vn

November 2, 2012, FSpace laboratory, FPT University issued an official report stating that no signal is heard from F-1 CubeSat after its deployment to space from the International Space Station (ISS) a month ago. However, the project team confirms that they are working to troubleshoot the problem.

According to Thu Trong Vu XV9AA, Project Manager, "As soon as F-1 was deployed from the ISS, FSpace's ground station in Hanoi and other amateur radio stations around the world have been listening on F-1" frequencies 145.980 MHz and 437.485 MHz but so far nothing heard except for a few uncertain reports of a weak signal during the first few days.

Preliminary analysis points to failure of the satellite's power supply subsystem as the cause of the problem. At the moment FSpace team together with US partner NanoRacks are collecting information, analyzing different scenarios that could happen to the satellite in orbit and experimenting with the Engineering Model (an identical backup unit) of F-1 CubeSat in the laboratory to determine the problem. The team is also planning to send uplink commands to the satellite in an effort to restart the onboard microcontroller. However, the chance of recovery is slim, the team acknowledged.

Currently, F-1 CubeSat is orbiting the Earth at an average altitude of 400km (perigee 390 km, apogee 410 km) and being tracked by NORAD as object #38855. Its altitude decreases with time due to friction with the atmosphere (atmospheric drag) and summarized in the following table. According to orbital analysis, the satellite has an orbital lifetime of about 5 months (until March 2013) before descending low and burn up completely in the atmosphere.

F-1's mission goals are to "survive" the space environment, taking

photos of the Earth and communicating with the ground control station at a speed of 1200 bit per second. Mr Thu said: "Although we haven't heard from F-1, during the course of the project team members have learned valuable knowledge and gained practical experience in developing a pico-satellite. This is an important stepping stone for us to move forward in the long journey to the stars".

F-1 frequencies:

+ 145.980 MHz: main channel, 1.0W RF output, FM, AFSK 1200bps, one telemetry packet every 30 seconds, operates in the dark by default (but can be commanded later to operate in sunlight as well)

+ 437.485 MHz: backup channel, 0.2W RF output, FM, PWM CW beacon, each beacon transmission lasts about 20 seconds then 60 seconds

delay, only operates in sunlight

More information and guide to download F-1 telemetry decoder can be found at http://fspace.edu.vn/?page_id'. Decoded data can be submitted to us via the telemetry decoder or by sending directly to: thuvt at fpt.edu.vn. Audio recordings are highly appreciated.

Read the full article at: http://www.uk.amsat.org/?p280 - and - http://www.uk.amsat.org/?p322

[ANS thanks AMSAT-UK and the F-1 CubeSat Team for the above information]

2013 CanSat Competition Applications Due November 30

Applications currently are being accepted for the 2013 CanSat Competition.

This annual competition is open to university and college students from the United States, Canada, Mexico and other countries. Teams of three to 10 students must design, build and launch a sensor payload called a CanSat. Each CanSat is slightly larger than a soda can and must be built according to the specifications released by the competition organizing committee.

All teams entering the CanSat competition are required to have a faculty adviser. The faculty adviser will oversee and be responsible for the conduct of the team at all times during the competition. The advisor is strongly encouraged to accompany the team to the competition.

Applications are due Nov. 30, 2012.

For more information about the competition and to download the application, visit http://www.cansatcompetition.com/.

Questions about this competition should be directed to: questions@juno.nrl.navy.mil.

[ANS thanks NASA Education Express for the above information]

NASA Offers Spot The Space Station Service Via Text or E-mail

WASHINGTON -- On the 12th anniversary of crews continuously living and working aboard the International Space Station, NASA announced Friday a new service to help people see the orbiting laboratory when it passes overhead. "Spot the Station" will send an email or text message to those who sign up for the service a few hours before they will be able to see the space station.

"It's really remarkable to see the space station fly overhead and to realize humans built an orbital complex that can be spotted from Earth by almost anyone looking up at just the right moment," said William Gerstenmaier, NASA's associate administrator for human exploration and operations. "We're accomplishing science on the space station that is helping to improve life on Earth and paving the way for future exploration of deep space."

When the space station is visible -- typically at dawn and dusk -- it is the brightest object in the night sky, other than the moon. On a clear night, the station is visible as a fast moving point of light, similar in size and brightness to the planet Venus. "Spot the Station" users will have the options to receive alerts about morning, evening or both types of sightings.

The International Space Station's trajectory passes over more than 90 percent of Earth's population. The service is designed to only notify users of passes that are high enough in the sky to be easily visible over trees, buildings and other objects on the horizon. NASA's Johnson Space Center calculates the sighting information several times a week for more than 4,600 locations worldwide, all of which are available on "Spot the Station."

Nov. 2 marks 12 years of continuous human habitation of the space station.

To sign up for "Spot the Station," visit: http://spotthestation.nasa.gov

For information about the International Space Station and a full list of sightings, visit: http://www.nasa.gov/station

ANS thanks NASA for the above information]

Satellite Shorts From All Over

+ Jan Poppeliers, ON7UX has put together a short video compilation of the AMSAT-UK Colloquium held in Guildford September 14-16: http://tinyurl.com/Colloquium-ON7UX (Southgate). Video of all of the Colloquium presentations can be found at: http://www.uk.amsat.org/?page_id953

+ Video of the launch of the Progress 49 cargo craft headed for the ISS can be viewed on-line at: http://www.youtube.com/watch?feature&#65533;ayer_embedded&v&#65533;tD7pg4htU This flight took advantage of the new abbreviated four-orbit rendezvous with the ISS. This flight was slated to bring a new VHF amateur radio handheld to the ISS. Due to crew scheduling the new radio is not planned to be activated until early 2013.

+ Update your keps! Russian Mission Control said the orbit of the International Space Station (ISS) was raised on Thursday by one

kilometer to avoid a possible collision with US Iridium-33 satel-
lite debris. The maneuver to adjust the station's orbit lasted
about seven minutes. The orbital readjustment was made using the
thrusters of Russia's Progress- M-16M spacecraft, docked with the
station.

+ A report on Space-Travel.com says "Japan Plans to Launch New Car-
rier Rocket in 2013." JAXA announced the Epsilon carrier rocket to
replace their M-5 Rocket. Epsilon's goal is to have an inexpensive
rocket to launch compact low-cost satellites into orbit. Read the
full story posted at: http://tinyurl.com/Japan-Epsilon.

+ South Korea sets new window for rocket launch. South Korea said
Monday it would make another atempt to send a satellite into space
sometime during a November 9-24 window from the Naro Space Centre
on the south coast next month after a scheduled rocket launch last
week was cancelled because of a technical glitch. Read the full
posted at: http://tinyurl.com/SK-Launch-Delay

+ Enjoy a video that will take you from the Big Bang to our current
human state in 90 seconds at: http://tinyurl.com/Life-in-90-seconds
(UniverseToday.com)

+ NASA TV posted a video segment filmed from an altitude of 254
statute miles using external cameras on the ISS as it captured
views of Hurricane Sandy on October 29, 2012 as it barreled to-
ward a landfall along the New Jersey coastline:
http://tinyurl.com/ISS-Sandy (YouTube)

+ A timelapse video of NASA GOES-13 weather satellite photos of Sandy
can be viewed at: http://tinyurl.com/goes13-Sandy (YouTube)

+ Prior to a successful splash down of the first commercial cargo
delivery to the ISS, SpaceX posted a video of Dragon's departure.
The frames are speeded up 15X to show the entire departure sequence
from the ISS: http://tinyurl.com/SpaceX-Departure (YouTube)

+ 13-14 November - total solar eclipse in a narrow band of the
Earth's surface, running across northern Australia and into the
South Pacific and across the international dateline. The eclipse
peaks at 22:11 UT. Observers in all of Australia, New Zealand,
and parts of southern Chile will see a partial solar eclipse
(with proper solar filters, of course). Details posted at:
http://eclipse.gsfc.nasa.gov/SEplot/SEplot2001/SE2012Nov13T.GIF

+ The next Hudson Valley Satcom net date is Thursday, November 8
at 9 PM EST (UTC-5) on the 146.97 MHz MBARC Repeater (PL 100).
An echolink connection is available on the N2EYH-L node. More
information at: http://www.hvsatcom.org. (Stu, WA2BSS)

[ANS thanks everyone for the above information]

/EX

In addition to regular membership, AMSAT offers membership in the President's Club. Members of the President's Club, as sustaining donors to AMSAT Project Funds, will be eligible to receive additional benefits. Application forms are available from the AMSAT Office.

Primary and secondary school students are eligible for membership at one-half the standard yearly rate. Post-secondary school students enrolled in at least half time status shall be eligible for the student rate for a maximum of 6 post-secondary years in this status. Contact Martha at the AMSAT Office for additional student membership information. And with that, please keep in mind that Sgr-A*, the 26,000 light-year distant black hole in the middle of our Milky Way galaxy, is consuming a gas cloud so large that it will take a decade, 2010 to 2020, to complete the encounter. Currently the dust in the cloud is approximately twice as hot as the surface temperature on Earth. The hydrogen gas in the cloud is twice as hot as the surface of the sun. A year from now temperatures in the cloud will become detectable to radio and X-ray telescopes on Earth as well as orbiting satellites such as NASA's Chandra X-ray Observatory.

73,
This week's ANS Editor,
JoAnne Maenpaa, K9JKM

158. Weekly Highlights of Solar and Geomagnetic Activity, 29 October - 04 November 2012

Newsgroup: rec.radio.amateur.space
Date: 2012-11-05 16:30:07 UTC
From: SWPC.Webmaster@noaa.gov
Message-ID: <20121105163001.592DB33C53@panix2.panix.com>
Source record: 58
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.dx,rec.radio.amateur.space,rec.radio.shortwave,rec.radio.info

```
:Product: Weekly Highlights and Forecasts
:Issued: 2012 Nov 05 0312 UTC
# Prepared by the US Dept. of Commerce, NOAA, Space Weather Prediction Center
# Product description and SWPC contact on the Web
# http://www.swpc.noaa.gov/weekly.html
#
# Weekly Highlights and Forecasts
#
Highlights of Solar and Geomagnetic Activity
29 October - 04 November 2012

Solar activity was at very low to low levels. The largest flares of
the period were a pair of C1 flares from Regions 1596 (N07, L=150,
class/area Eho/460 on 21 October) and 1598 (S12, L=111, class/area
Dki/420 on 23 October) at 0507 UTC and 1139 UTC on 31 October,
respectively. Other activity of note was a 24 degree long filament
eruption centered at S32E07 that occurred from 0640-0855 UTC on 30
October. No Earth-directed coronal mass ejections (CMEs) were
observed during the reporting period.

No proton events were observed at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit was at
moderate levels on 29-30 October and again on 01 November. High
levels were reached on 31 October. Normal background levels were
observed from 02-04 November.

Geomagnetic field activity was at quiet to active levels with major
to severe storm periods observed at high latitudes. The period began
with quiet conditions until a sudden increase in solar wind speed at
the ACE spacecraft from 290 - 360 km/s occurred at approximately
31/1445 UTC. A sudden impulse (13 nT) was observed at the Boulder
magnetometer at 1539 UTC on 31 October. This initial activity was
due to a pair of CMEs resulting from filament eruptions on 27 and 28
October. The geomagnetic field responded with a unsettled period
during the 1500-1800 UTC period on 31 October. At approximatly
31/2348 UTC, the total magnetic field (Bt) increased from 9 to 15 nT
while the Bz component rotated to a southward (negative) component
for approximately 20 hours (maximum deflection of 11 nT). The
geomagnetic field responded with quiet to active levels with major
to severe storm periods observed at high latitudes on 01 November.
By 02 November through the rest of the reporting period, quiet
conditions prevailed.
```

Forecast of Solar and Geomagnetic Activity
05 November - 01 December 2012

Solar activity is expected to be very low to low until 08 November.
>From 08-21 November, a chance for M-class flares exist as old Region
1594 (S27, L=199) rotates across the visible disk. From 22 November
until the end of the forecast period, very low to low levels are
expected.

No proton events are expected at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit is
expected to be at high levels from 09-24 November. Normal to
moderate levels are expected from 25 November through 01 December.

Geomagnetic field activity is expected to be quiet to unsettled
through the forecast period. Unsettled conditions with a chance for
active periods are expected from 08-11 November and again on 13
November due to activity from a recurrent coronal hole high speed
stream.

159. Radio Meteor Obs. Bull. October 2012 Draconids Orionids

Newsgroup: rec.radio.amateur.space
Date: 2012-11-07 19:43:18 UTC
From: Chris Steyaert <observations@rmob.org>
Message-ID: <beel98phknqpuhfloedrk8hi6282t8k1m8@4ax.com>
Source record: 59
Cross-posted to: rec.radio.amateur.space,sci.astro.amateur

Radio Meteor Observation Bulletin No. 231 of October 2012 (81 K) is available now as

http://www.rmob.org/rmobtext/rmob1210.txt

More information and the visual presentation of the hourly forward scatter counts can be found on

http://www.rmob.org

Chris

160. control

Newsgroup: rec.radio.amateur.space
Date: 2012-11-09 12:49:01 UTC
From: me <me@me.com>
Message-ID: <45181447@aioe.org>
Source record: 60

```
Hi everyone.
```

everybody should applicate this type of guidelines

These are people that
had good water,&#65533; said John Fenton, a barrel-chested farmer and chairman of
the Pavillion Area Concerned Citizens group. &#65533;And it changed when there was
this rush to come in here and develop the area when they didn&#65533;t understand
the geology.&#65533;
Mr. Fenton said he thought he had dodged a bullet until about
three years ago, when his tap water began occasionally fizzing and smelling
like petroleum. And even though Encana is giving him drinking water, Mr.
Fenton said he and his family still bathe in dirty water.
In the meantime,
the state has offered to provide cisterns for local residents, using $750,000
allocated by the Wyoming Legislature this year. Under the plan, people here
would still have to pay a fee to have their water hauled from the nearby
community of Pavillion, at a cost that could run more than $150 per month.

```
In the meantime, the state has offered to provide cisterns for local
residents, using $750,000 allocated by the Wyoming Legislature this year.
Under the plan, people here would still have to pay a fee to have their water
hauled from the nearby community of Pavillion, at a cost that could run more
than $150 per month.
;
how do you describe the storm customizing?

Before debating about the storm , this site seems appropriate
http://en.wikipedia.org/wiki/Water_quality
ciao
```

161. Weekly Highlights of Solar and Geomagnetic Activity, 05 - 11 November 2012

Newsgroup: rec.radio.amateur.space
Date: 2012-11-12 16:31:19 UTC
From: SWPC.Webmaster@noaa.gov
Message-ID: <20121112163111.BB2C433C9D@panix2.panix.com>
Source record: 61
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.dx,rec.radio.amateur.space,rec.radio.shortwave,rec.radio.info

```
:Product: Weekly Highlights and Forecasts
:Issued: 2012 Nov 12 0405 UTC
# Prepared by the US Dept. of Commerce, NOAA, Space Weather Prediction Center
# Product description and SWPC contact on the Web
# http://www.swpc.noaa.gov/weekly.html
#
# Weekly Highlights and Forecasts
#
Highlights of Solar and Geomagnetic Activity
05 - 11 November 2012

Solar activity ranged from very low to moderate levels. On 05
November, low levels were observed due to a C2 X-ray flare from a
unnumbered region around the southeast limb at 05/1839 UTC. Solar
activity remained at very low levels until 08 November when a long
duration M1 flare was observed at 08/0223 UTC from Region 1611 (N13,
L=240, class/area Eso/270 on 09 November). Associated with this
event was a Type II radio sweep (784 km/s) and a non-geoeffective
coronal mass ejection (CME) off the East limb. Also on 08 November,
a full halo backsided CME was observed in SOHO/LASCO imagery from
old Region 1598 (S12, L=111). By 09 November, solar activity
returned to low levels with a single C1 flare from Region 1604 (N08,
L=322, class/area Bx0/010 on 03 November) at 09/0151 UTC. Also on 09
November, a 12 degree long filament, centered near S16E03, erupted
at approximately 09/1230 UTC which resulted in an Earth-directed CME
first observed in SOHO/LASCO C2 imagery at 09/1524 UTC. By 10
November, multiple low level C-flares were observed including a long
duration C2 flare from Region 1608 (S20, L=286, class/area Hrx/020
on 06 November) at 10/0504 UTC. An Earth-directed CME was observed
in association with this C2 flare in STEREO A COR2 imagery at
10/0539 UTC and SOHO/LASCO C3 imagery at 10/1054 UTC. By 11
November, solar activity increased to moderate levels due to an M1
flare from Region 1614 (N15, L=193, class/area Dso/110 on 11
November) at 11/0233 UTC with an associated Type II radio sweep (659
km/s).

An enhancement of the greater than 10 MeV proton flux at
geosynchronous orbit was observed beginning at approximately 08/1400
UTC likely associated with flare activity and the associated CME
from old Region 1598. A peak enhancement of 2.4 pfu was observed at
09/0420 UTC and remained slightly enhanced through the end of the
reporting period. No event thresholds were exceeded.
```

The greater than 2 MeV electron flux at geosynchronous orbit was at normal background levels throughout the reporting period.

Geomagnetic field activity was at quiet levels until 07 November when a coronal hole high speed stream (CH HSS) moved into geoeffective position. At 06/2119 UTC, the phi component of the interplanetary magnetic field changed from positive to negative with corresponding increases in density, temperature, and speed in ACE spacecraft data indicating a solar sector boundary crossing followed by a co-rotating interaction region and CH HSS. Solar wind speed increased from approximately 300 km/s to a peak of near 525 km/s by 07/1538 UTC. Total field (Bt) reached a maximum of 14 nT at 07/0031 UTC with a maximum deflection of the Bz component southward to -12 nT at 07/0039 UTC. The geomagnetic field responded with quiet to active periods on 07 November. By 08 November, conditions returned to quiet levels and remained that way through the end of the reporting period.

Forecast of Solar and Geomagnetic Activity
12 November - 08 December 2012

Solar activity is expected to be low with a chance for M-class flares through 24 November when Region 1614 is due to rotate off the west limb. Very low to low conditions are expected from 12 November until 27 November. On 28 November, and through the end of the forecast period, very low to low conditions with a chance for M-class activity is expected with the return of old Region 1598.

There is a slight chance for a greater than 10 MeV proton event from 28 November through the end of the reporting period due possible flare activity from old Region 1598.

The greater than 2 MeV electron flux at geosynchronous orbit is expected to be at normal levels on 12 November. Moderate to high levels are expected from 13-24 November due to CME activity and recurrence. Normal levels are expected from 25 November through 03 December. Moderate to high levels are expected from 04-06 December due to CH HSS activity. By 07 December through the end of the forecast period, normal levels are expected.

Geomagnetic field activity is expected to be unsettled to active with a chance for minor storm periods starting around mid-day on 12 November and continuing through 13 November as the 09 and 10 November CMEs are expected to become geoeffective. Unsettled levels are expected on 14 November as CME activity wanes. Mostly quiet conditions are expected from 15-18 November. Quiet to unsettled conditions are possible on 19 November due to a possible solar sector boundary crossing. From 20 November through 02 December, mostly quiet conditions are expected. On 03-04 December, a recurrent CH HSS is expected to become geoeffective causing quiet to unsettled with isolated active conditions. A return to mostly quiet conditions is expected from 05 December through the end of the forecast period.

162. Crossposting Permitted to rec.radio.amateur.moderated

Newsgroup: rec.radio.amateur.space
Date: 2012-11-15 07:00:02 UTC
From: rram@panix.com
Message-ID: <radio/ham-radio/moderated/crossposting-1-1352962800@panix.com>
Source record: 62
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space,rec.radio.info

```
Posted-By: auto-faq 3.3.2 beta (PGPMoose V2.0, Perl 5.005)
Archive-name: radio/ham-radio/moderated/crossposting
Revision: 1.2 2011/11/02 04:08:53
Posting-Frequency: posted twice monthly
URL: http://www.panix.com/~rram/usenet/rram/index.html

Changes followed by "|".

After a 30-day public discussion and feedback period to gauge reader
opinions in March of 2009:

http://groups.google.com/group/rec.radio.amateur.moderated/browse_thread/thread/d7d337db35
f23326

the rec.radio.amateur.moderated Moderation Team had decided to consider |
amending its charter, and permit limited simultaneous crossposting to
rec.radio.amateur.moderated and one other unmoderated
amateur-radio-related discussion newsgroup. After a successful trial |
period (90 days, through early July 2009), we decided to adopt this |
change permanently. |

Approved rec.radio.amateur.* newsgroups are those that are currently
listed in the latest version of the "List of Big Eight Newsgroups" which
is crossposted monthly to news.announce.newgroups, news.groups, and
news.lists.misc.

Approved alt.radio.amateur.* and alt.ham-radio.* newsgroups are those
that have been created consistent with the suggestions in "So You Want
to Create an Alt Newsgroup" at:

http://www.faqs.org/faqs/alt-creation-guide/

Approved regional hierarchy newsgroups are those that contain either
"radio.amateur" or "ham-radio" in their names, including
uk.radio.amateur and aus.radio.amateur.misc.

We will make every reasonable effort to keep our list of approved
newsgroups up-to-date. In case we have overlooked any, and a submission
is rejected in error as a result, the rejected submitter can E-mail us
at our administrative contact address (in the signature at the bottom of
this article, and the default Reply-To for the rejection message)
requesting that it be added, and that the article be approved. We may
still choose to reject articles crossposted to any alt.* newsgroup with
an inappropriate name, including obscene language, embedded
name-calling, or encouragement of unlawful conduct.
```

Please direct any comments, questions, or criticisms to
rec-radio-amateur-moderated-request@panix.com.

163. Weekly Highlights of Solar and Geomagnetic Activity, 12 - 18 November 2012

Newsgroup: rec.radio.amateur.space
Date: 2012-11-19 16:30:11 UTC
From: SWPC.Webmaster@noaa.gov
Message-ID: <20121119163001.7F3E733C2F@panix2.panix.com>
Source record: 63
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.dx,rec.radio.amateur.space,rec.radio.shortwave,rec.radio.info

```
:Product: Weekly Highlights and Forecasts
:Issued: 2012 Nov 19 0648 UTC
# Prepared by the US Dept. of Commerce, NOAA, Space Weather Prediction Center
# Product description and SWPC contact on the Web
# http://www.swpc.noaa.gov/weekly.html
#
# Weekly Highlights and Forecasts
#
Highlights of Solar and Geomagnetic Activity
12 - 18 November 2012

Solar activity ranged from low to high. On 12 November, moderate
levels were observed due to a M2 X-ray flare from Region 1613 (S22,
L=210, class/area Dso/170 on 12 November) and associated Type II
radio sweep (645 km/s) at 12/2328 UTC. Solar activity increased to
high levels on 13 November due to a M6 X-ray flare, also from Region
1613, and associated Type II radio sweep (1193 km/s) at 13/0204 UTC.
This region also produced two M2 X-ray flares and an associated 10
cm burst of 220 sfu at 13/2052 UTC, but showed signs it was
decreasing in areal coverage. Region 1613 continued its M-class
flare activity into 14 November, producing a M1 X-ray flare, but
continued to slowly decrease in area. A return to low levels was
observed from 15 to 18 November. A C8 flare from Region 1618 (N08,
L=136, class/area Eai/90 on 18 November) occurred at 16/1539 UTC
with an associated Type II radio sweep (511 km/s) and a non-earth
directed coronal mass ejections (CME). A long duration C1 flare from
Region 1613 also occurred on 16 November with an associated 24
degree filament eruption centered near S39E22. Another filament
eruption was observed from the East limb, as seen in SDO/AIA 304
imagery, but analysis of SOHO/LASCO C2 suggested these eruptions
would not be geoeffective. While there were many new CMEs observed
over the 7 day period, none were determined to be earth-directed and
have had little to no observable impacts.

No greater than 10 MeV proton events were observed at geosynchronous
orbit.

The greater than 2 MeV electron flux at geosynchronous orbit was at
normal background levels on 12 and 13 November, but reached moderate
levels on 14, 15, and 16 November. The week ended with high levels
for 17 and 18 November with the maximum value reaching 3160 pfu.

Geomagnetic field activity ranged from quiet to major storm levels.
The week started off at quiet to unsettled levels, but by late 12
```

November to early 13 November, the effects from the two CMEs from 09 and 10 November were being felt. ACE data indicated a shock arrival at 12/2216 UTC and a sudden impulse was observed on earth at 12/2316 UTC (16 nT, as measured by the Boulder USGS magnetometer). The maximum southward component of Bz reached -19.5 nT at 12/2338 UTC, the total IMF reached 22.8 nT at 13/0053 UTC. The solar wind speed, as measured by the ACE spacecraft, reached a peak speed of 504 km/s at 13/0111 UTC. The geomagnetic field responded with unsettled to active levels throughout the day on 13 November, but increased to major storm levels early on 14 November. The increase in activity was caused by prolonged period of negative Bz attributed to a combination of lingering CME effects and a solar sector boundary crossing that occurred at approximately 14/0245 UTC, followed by a negative polarity coronal hole high speed stream (CH HSS). Activity returned to quiet to unsettled levels for the remainder of the week (15 - 18 November).

Forecast of Solar and Geomagnetic Activity
19 November - 15 December 2012

Solar activity is expected to be low with a chance for M-class flares through 27 November when Region 1618 is due to rotate off the west limb. Very low to low conditions are expected from 28 November through 05 December. From 06 December to the end of the period, low conditions are expected with a chance for M-class activity with the return of Region 1613.

No greater than 10 MeV proton events are expected at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit is expected to remain at moderate to high levels through 24 November. Normal levels are expected to return from 25 November through 03 December. Moderate to high levels are expected from 04-06 December due to coronal hole high speed stream (CH HSS) activity. Normal levels are again expected to return from 07 December through 13 December. From 14 December to the end of the period, expect moderate to high levels to return with CH HSS activity once again.

Geomagnetic field activity is expected to be mostly quiet through 02 December. Unsettled levels are likely on 03 and 04 December due to a possible solar sector boundary crossing (SSBC) followed by a CH HSS. Mostly quiet levels return from 05 December through the end of the period, except for a chance for unsettled activity on 11 December due to a possible SSBC/CH HSS.

164. ANS-330 AMSAT News Service Weekly Bulletins

Newsgroup: rec.radio.amateur.space
Date: 2012-11-25 02:37:53 UTC
From: JoAnne Maenpaa <k9jkm@comcast.net>
Message-ID: <002301cdcab5$937a75a0$ba6f60e0$@net>
Source record: 64
Cross-posted to: rec.radio.amateur.space,rec.radio.info

AMSAT NEWS SERVICE
ANS-330

ANS is a free, weekly, news and information service of AMSAT North America, The Radio Amateur Satellite Corporation. ANS reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in designing, building, launching and communicating through analog and digital Amateur Radio satellites.

Please send any amateur satellite news or reports to:
ans-editor at amsat.org

In this edition:

* Fox-1 CubeSat Design Published in Proceedings and Web
* 2012 AMSAT Symposium Proceedings Available in the AMSAT Store
* PhoneSat CubeSat to Launch from Wallops in December
* N0D Special Event Station Celebrating The End of the World
* Successful ARISS School Contacts This Week
* Three Astronaut Hams Return Safely From ISS
* Call for Papers for IAA Conference: University Satellite Missions
* Satellite Shorts From All Over

SB SAT @ AMSAT $ANS-330.01
ANS-330 AMSAT News Service Weekly Bulletins

AMSAT News Service Bulletin 330.01
>From AMSAT HQ SILVER SPRING, MD.
November 25, 2012
To All RADIO AMATEURS
BID: $ANS-330.01

Fox-1 CubeSat Design Published in Proceedings and Web

During the 2012 Symposium AMSAT Vice-President Engineering, Tony Monteiro, AA2TX and the Fox Engineering team presented the latest status on the design, development, and construction of the Fox-1A satellite project. This is the 1U cubesat which is slated as the FM repeater transponder to replace AO-51.

The Proceedings of the AMSAT-NA 30th Symposium and AMSAT-NA Annual Meeting, October 26-28 in Orlando, Florida have been put in the on-line AMSAT Store. Please visit the store at:
http://store.amsat.org/catalog/

The proceedings contains over 30 articles on subjects ranging from current satellite operations to detailed updates on the Fox Project.

AMSAT's Fox web page at http://www.amsat.org/amsat-new/fox/ now has been refreshed with the latest information from the Symposium:

+ Fox-1 Mechanical design and component integration diagrams

+ Fox-1 Thermal Design

+ Fox-1 Radiation Environment

+ Preliminary screenshot view of Fox-1 Telemetry Program

Fox-1A's design goals include:

+ Fox-1 is designed to operate in sunlight without batteries once the battery system fails. This applies lessons learned from AO-51 and ARISSat-1 operations.

+ In case of IHU computer failure Fox-1 will continue to operate its FM repeater in a basic, 'zombie sat' mode, so that the repeater remains on-the-air.

+ Fox-1 is designed as the immediate replacement for AO-51. Its U/V (Mode B) transponder will make it even easier to work with modest equipment.

+ From the ground user's perspective, the same FM amateur radio equipment used for AO-51 may be used for Fox-1.

AMSAT's Fox-1 project timeline is based on targeting a launch in the second half of 2013. NASA will determine on which flight each of the Project ELaNa CubeSats fly.

Watch for news in the AMSAT Journal for details of AMSAT's partnership with universities, the National Science Foundation, and NASA in seeking grants for getting the first and future Fox generation satellites into orbit.

[ANS thanks the Fox Team for the above information]

2012 AMSAT Symposium Proceedings Available in the AMSAT Store

The Proceedings of the AMSAT-NA 30th Symposium and AMSAT-NA Annual Meeting, October 26-28 in Orlando, Florida have been put in the online AMSAT Store. Please visit the store at: http://store.amsat.org/catalog/

The proceedings contains over 30 articles on subjects ranging from current satellite operations to updates on the Fox Project.

If you could not make the meeting, this is a great source of the latest information.

Price is $25 + $12 Shipping for USA. See the details on the store web page and order your copy today!

[ANS thanks Martha at the AMSAT Office for the above information]

PhoneSat CubeSat to Launch from Wallops in December

The PhoneSat cubesat is planned for launch aboard a new commercial rocket from Orbital Sciences Corp. Orbital's initial flight of the Antares-110 vehicle will carry PhoneSat into low earth orbit around December 17. The vehicle will be launched from a new launch pad LA-0A at Wallops Island, where the former Conestoga launch pad was located.

Phonesat carries an amateur radio payload on 437.425 MHz, has been chosen as one of the winners in the Aerospace category for the Popular Science magazine "Best of What's New 2012" awards.

PhoneSat is a technology demonstration mission consisting of three 1U CubeSats intended to prove that a smartphone can be used to perform many of the functions required of a spacecraft bus.

The satellite is built around the Nexus smartphone which will be running the Android operating system and will be enclosed in a standard 1U cubesat structure. The main function of the phone is to act as the Onboard Computer, but the mission will also utilize the phone's SD card for data storage, 5MP camera for Earth Observation, and 3-axis accelerometer and 3-axis magnetometer for attitude determination.

One of the nanosatellites, powered by the HTC Nexus One smartphone, will send back pictures of Earth. The other two, running on the Samsung Nexus S, will have two-way S-band radio allowing them to be controlled from Earth.

With a short lifetime of only about one week, the satellites have no solar cells and operate on battery only.

More information about the Antares vehcicle can be found at:
http://www.orbital.com/Antares/

A video of the Popular Science award for PhoneSat in the "Best of What's New 2012" awards can be viewed at:
http://tinyurl.com/PhoneSatNews (YouTube)

NASA Ames web page of the PhoneSat project can be found at:
http://tinyurl.com/PhoneSat-NASA (nasa.gov)

AMSAT-UK posted news of PhoneSat at:
http://www.uk.amsat.org/?p=11544

[ANS thanks NASA, Gunter's Space Page, and AMSAT-UK for the above information]

N0D Special Event Station Celebrating The End of the World

That's right, the end is finally near. According to one of the three Mayan Calendars, the End of the world will occur on Dec 21, 2012. To celebrate this literally once in a lifetime event, Special Event Station N0D (Now Zero Days) will be activated for three days during and after(?) the end of the world. December 20 is a celebration of the end of the world. December 21, the day of destruction, we will be on the air as long as possible. December 22nd, that is a little iffy right now.

N0D will be activated on the satellites by Allen Mattis, N5AFV, on December 20, 2012, on December 21, 2012 unless the day of destruction makes that impossible, and on December 22, 2012 if the world survives.

More information is available on the Official N0D website:
http://www.nowzerodays.com
You can also e-mail the N0D team at N0D.Doomsday@gmail.com

Amateur radio stations around the crumbling globe are invited to contact N0D, who will be operating from a secret undisclosed location. QSL with SASE to the address in QRZ. If Doomsday actually does happen,

we regret that a QSL will not be possible so hold on to your SASE until the 22nd at least. Check out the website for a preview of the N0D QSL card.

You can celebrate Doomsday by contacting N0D directly on the air. Amateurs can also become an official Doomsday station by registering on the website. You will be given a registration number and the authority to identify yourself as "Official Doomsday Station" followed by your Doomsday number.

Official N0D Doomsday apparel will be available soon; T-shirts, Caps and buttons.

Official Doomsday stations will receive the Doomsday Station Certificate. Stations contacting at least 10 Official Doomsday Stations during the event will be recognized on the web site.

It is not entirely clear exactly how it will happen. Will it be a cataclysmic shift in the earth's magnetic field, Global Warming on steroids, earthquakes, volcanoes floods, global thermonuclear war, Meteor collision, the 10 plagues of Egypt, UFO invasion. who knows? There are scientists, soothsayers and philosophers on both sides of the question. Either way it will be an event worth remembering ... or maybe there will be no one left to remember it?

Check the website for the latest updates: http://www.nowzerodays.com

[ANS thanks Allen Mattis, N5AFV for the above information]

Successful ARISS School Contacts This Week

Italy

An Amateur Radio on the International Space Station (ARISS) contact was held with Liceo scientifico Giacinto De Sivo - Fondazione Villaggio dei Ragazzi in Maddaloni, Italy on Tuesday, November 20. Amateur Radio station IK1SLD in Italy provided the radio link. The contact is incorporated into lessons focused on the developments in astronomy from a scientific, philosophical, and literary point of view.

India

An Amateur Radio on the International Space Station (ARISS) contact was held between Sunita Williams, KD5PLB on the ISS and students visiting the GujaratScience City (GSC) in Ahmedabad, Gujarat, India on Wednesday, November 14 via telebridge station IK1SLD in Italy.

The children got in 15 questions about daily life on the ISS before losing the radio connection. GSC has high-tech exhibitions covering space exploration and communications; the contact was part of a special outreach program of the GSC, organized to provide students with hands-on activities related to the ISS. The displays and activities provide children with the motivation and inspiration for a career and future in space science and research. The Times of India covered the event. See:
http://timesofindia.indiatimes.com/city/ahmedabad/Excited-kids-go-on-space-talk-with-Sunita/articleshow/17250710.cms

Video of this event can be viewed on-line at:
http://tinyurl.com/ARISS-Contact-India (Southgate)

Florida

On November 16, Florida's Flagler Palm Coast Amateur Radio Club (FPCARC) connected with Astronaut Sunita Williams, KD5PLB via an Amateur Radio on the International Space Station (ARISS) contact. Indian Trails Middle School hosted the event, but students from other area schools also participated.

Former NASA astronaut Winston Scott gave a presentation to the students. All schools in the district were able to participate in the event through live internet streaming. Media representatives were present and articles have been posted.

FlaglerLive.com has a story:
http://flaglerlive.com/46845/ham-radio-iss/

For the Palm Coast Observer article, see:
http://www.palmcoastobserver.com/news/palm-coast/Neighborhood/111720125718/
Students-get-visit-from-astronaut-talk-to-space-st

Indiana

Cumberland Elementary School participated in an ARISS contact on October 30. Students had the opportunity to question Indiana native Kevin

Ford, KF5GPP about ISS life. The contact video is now available. See: http://cumberland-iss.weebly.com

[ANS thanks Carol Jackson, KB3LKI and the 2012-11-19 ARISS Status Report for the above information]

Three Astronaut Hams Return Safely From ISS

Expedition 33 Commander Sunita Williams, KD5PLB of NASA and Flight Engineers Akihiko Hoshide, KE5DNI of Japan Aerospace Exploration Agency and Yuri Malenchenko, RK3DUP of Roscosmos rode their Soyuz TMA-05M spacecraft to a safe landingin a remote area near the town of Arkalyk, Kazakhstan on November. 19, 2012. Williams, Hoshide and Malenchenko returned from four months onboard the International Space Station.

NASA ISS Ham Radio Project Engineer Kenneth Ransom, N5VHO summarized Amateur Radio on the International Space Station (ARISS) successes for Williams, Malenchenko and Hashide noting 39 contacts with schools. Of these contacts 14 were via telebridge, while 25 took place directly between the school and the ISS via Amateur Radio.

During Expedition 32 Sunita added 22 to her previous record of 33 school events which puts her on top for the most career schools talked to from orbit. Malenchenko made two contacts, one with the Ukraine and another with Russia, while Hashide completed 15, including four with his native Japan, as well as with the US, Germany, Australia, Poland and Italy.

Photos and additional news of the Soyuz landing are on-line at:
http://spaceref.com/news/viewsr.html?pid=42645
http://spaceref.com/news/viewsr.html?pid=42643
http://tinyurl.com/NovSoyuzLanding (Space-Travel.com)

Expedition 34 is crewed by NASA astronaut Kevin Ford, KF5GPP, and Russian cosmonauts Evgeny Tarelkin and Oleg Novitskiy.

Sunita Williams recorded an extensive tour of the orbital laboratory including scenes of each of the station's modules and research facilities with a running narrative of the work that has taken place and which is ongoing aboard the orbital outpost.

Get your ISS tour at: http://tinyurl.com/ISS-Guided-Tour (YouTube)

[ANS thanks, ARISS, ARRL, SpaceRef.com and Space-Travel.com for the above information]

Call for Papers for IAA Conference: University Satellite Missions

The 2nd IAA Conference on University Satellites Missions and Cubesat Winter Workshop will be held in Rome, Italy from February 3-9, 2013 under the main sponsorship of IAA, GAUSS Srl, ESA, ASI, Italian Air Force, Sapienza University of Roma, Morehead State University (Kentucky), Von Karman Institute, FILAS, BCC Roma.

The Conference has the goal to provide the international space community with a forum for presentations and discussions in the area of University Satellites. Particular emphasis will be given to the theme, "Innovative aspects related to science and engineering for university satellites". Three days will be completely dedicated to the Cubesat community.

Some of the proposed topics are:

Space Environment, Remote sensing and Earth observation, Innovative solutions for university satellite subsystems, Launch opportunities, Space Debris, Ground Segment and Stations Network, New Perspectives for Cubesats, Cubesats Future Payloads and Experiments, Satellite Orbit and Attitude Determination and Control, Micro-propulsion Subsystems, University Platform for biomedical research in Space, Formation Flying, Cubesat In-Orbit Experience, Cubesats Scientific Missions and applications" activities.

The preliminary program, logistics, and registration information, exhibition stand information may be found on the symposium website at http://www.gaussteam.com in the events section.

Abstract Submission Deadline: December 17, 2012
Acceptance Notification*: December 22, 2012
Paper Submission Deadline*: January 25, 2013

[ANS thanks Filippo Graziani, G.A.U.S.S. President and IAA member, Conference Chair for the above information]

Satellite Shorts From All Over

+ Video of ARISS contact from the National Scouting Museum Jamboree on the Air (JOTA) event in Irving, Texas on October 20 with Sunita Williams, KD5PLB on the ISS can be viewed at:
http://vimeo.com/53281390

+ NASA's Pete Worden presentation at the Canadian Space Summit on the topic of Small Satellites for Science and Other Uses and as an example: Earth Observation, promises and challenges has been posted by SpaceRef.com at:
http://tinyurl.com/SpaceRefSmallSatellites

+ Andy Foad, G0FTD has made a collection of RF calculations available in a spreadsheet. This can be downloaded from:
https://sites.google.com/site/g0ftdradio/home/rf-spreadsheets

+ How about the concept of private/commercial CubeSat missions to Mars? See the exploremars.org posting at: http://tinyurl.com/CubeSatsToMars

+ The Van Allen Probes Mission, part of NASA's Living With a Star program, studies the physical dynamics of Earth's radiation belts and space weather. A video of this mission, including classroom activities about space weather is posted by Johns Hopkins University Applied Physics Laboratory: http://vanallenprobes.jhuapl.edu/ (Bill, W3XO)

[ANS thanks everyone for the above information]

/EX

In addition to regular membership, AMSAT offers membership in the President's Club. Members of the President's Club, as sustaining donors to AMSAT Project Funds, will be eligible to receive additional benefits. Application forms are available from the AMSAT Office.

Primary and secondary school students are eligible for membership at one-half the standard yearly rate. Post-secondary school students enrolled in at least half time status shall be eligible for the student rate for a maximum of 6 post-secondary years in this status. Contact Martha at the AMSAT Office for additional student membership information. And with that, please keep in mind the ham who's son pestered his parents for a trip to the zoo. Finally his mother talked his reluctant father into taking him. "So how was it?" his mother asked when they returned home. "Great," the son replied. "Did you and your father have a good time?" asked his mother. "Yeah, Daddy really liked it," exclaimed the son excitedly, "especially when one of the animals came home at 30 to 1!"

73,
This week's ANS Editor,
JoAnne Maenpaa, K9JKM

165. Weekly Highlights of Solar and Geomagnetic Activity, 19 - 25 November 2012

Newsgroup: rec.radio.amateur.space
Date: 2012-11-26 16:30:10 UTC
From: SWPC.Webmaster@noaa.gov
Message-ID: <20121126163002.C77AB33C2F@panix2.panix.com>
Source record: 65
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.dx,rec.radio.amateur.space,rec.radio.shortwave,rec.radio.info

```
:Product: Weekly Highlights and Forecasts
:Issued: 2012 Nov 26 0613 UTC
# Prepared by the US Dept. of Commerce, NOAA, Space Weather Prediction Center
# Product description and SWPC contact on the Web
# http://www.swpc.noaa.gov/weekly.html
#
# Weekly Highlights and Forecasts
#
Highlights of Solar and Geomagnetic Activity
19 - 25 November 2012

Solar activity ranged from very low to moderate levels. The summary
period started out at low levels but changed on day two as Region
1618 (N08, L=135, class/area Ekc/450 millionths on 23 November) and
Region 1612 (N09, L=228, class/area Hsx/100 millionths on 12
November) both produced M-class x-ray events. Region 1612 produced
an M1 solar flare at 20/1241 UTC with multiple discrete radio
frequency bursts. Around the same time, h-alpha imagery indicated
multiple filament channel eruptions. LASCO C2/C3 imagery supported a
partially Earth directed CME. Region 1618 followed this event with
an M1/Sn solar flare at 20/1928 UTC. Associated with this flare were
several discrete radio frequency bursts. LASCO C2/C3 imagery
indicated a CME, however further analysis indicated that this would
not be Earth directed. On 21 November, Region 1618 continued to
produce M-class solar flares, with an M1/1n solar flare at 21/0656
UTC and an M3 x-ray event at 21/1530 UTC. Both of these events had
Type II and Type IV radio sweeps associated with them. Imagery once
again supported another Earth directed CME. Later on 21 November, a
large filament erupted off the north-east limb. Location and imagery
suggested this CME would not be Earth directed. Activity declined to
very low levels on 22 November. Region 1618 remained a magnetically
complex region during this time, however simplification in the
leader spots was observed. Low levels prevailed throughout the
summary period with Region 1618 producing the occasional C-class
events. On 23 November, a large filament eruption was observed in
the southwest quadrant of the solar disk. The associated CME was
determined to have an Earth directed component. Towards the end of
the summary period, Region 1620 (S13, L=92, class/area Hax/090
millionths on 23 November) started to evolve and produce C-class
activity. At the end of the period, Region 1620 was magnetically
classified as a beta-gamma.

No proton events were observed at geosynchronous orbit.
```

The greater than 2 MeV electron flux at geosynchronous orbit was high levels on 19, 22 and 23 November. The remaining days were at normal to moderate levels.

Geomagnetic field activity was at quiet to active levels. The summary period began at quiet levels with solar wind speed, as measured by the ACE spacecraft, hovering around 400 km/s. On 20 November, an increase in solar wind speed to around 460 km/s was observed, with sustained periods of the negative Bz component of the (Interplanetary Magnetic Field) IMF. This observed change in the solar wind parameters help drive unsettled to active levels late on 20 November and early into 21 November. Predominantly quiet levels prevailed until late on 23 November when solar wind observations indicated the arrival of a CME. At the ACE spacecraft, solar wind speeds increased from 320km/s - 420 km/s with Bt of the IMF increasing to around 17 nT. As the CME arrived at Earth, an increase to active levels was observed. As CME effects continued on to 24 November, active to quiet levels were observed with isolated minor to major storm periods observed at high latitudes. As CME effects waned, quiet level prevailed from late on 24 November throughout the rest of the summary period. Initial analysis and data suggested this was the CME from 20 November, however as the CME progressed, data suggested the incoming CMEs might have merged into this one event.

Forecast of Solar and Geomagnetic Activity
26 November - 22 December 2012

Solar activity is expected to be at low levels with a chance for M-class flares from 26 November - 01 December as Regions 1620 and 1618 evolve and rotate off the visible disk. A decrease to low levels is forecast from 02 - 04 December. An increase to low levels with a slight chance for M-class flares is expected for the remainder of the period as Regions 1612, 1618, and 1620 return.

No proton events are expected at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit is expected to be at normal to moderate levels from 26 November - 05 December, 08- 11 December, and 19-22 December. High levels are expected at all other times due to coronal hole high speed stream activity.

Geomagnetic field activity is expected to be at quiet to active levels. The forecast period is expected to begin at predominantly quiet levels. On 27 - 29 November, an increase to quiet to active levels is expected as the CME from 23 November is expected to become geoeffective. From 30 November through 05 December, quiet to unsettled levels are expected in response to multiple coronal hole high speed streams. A return to quiet levels is expected from 06-10 December. Another increase to quiet to unsettled levels is expected on 11-15 December due to recurrent coronal hole high speed streams. A return to quiet levels is expected for the remainder of the period.

166. Crossposting Permitted to rec.radio.amateur.moderated

Newsgroup: rec.radio.amateur.space
Date: 2012-12-01 07:00:02 UTC
From: rram@panix.com
Message-ID: <radio/ham-radio/moderated/crossposting-1-1354345200@panix.com>
Source record: 66
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space,rec.radio.info

```
Posted-By: auto-faq 3.3.2 beta (PGPMoose V2.0, Perl 5.005)
Archive-name: radio/ham-radio/moderated/crossposting
Revision: 1.2 2011/11/02 04:08:53
Posting-Frequency: posted twice monthly
URL: http://www.panix.com/~rram/usenet/rram/index.html

Changes followed by "|".

After a 30-day public discussion and feedback period to gauge reader
opinions in March of 2009:

http://groups.google.com/group/rec.radio.amateur.moderated/browse_thread/thread/d7d337db35
f23326

the rec.radio.amateur.moderated Moderation Team had decided to consider |
amending its charter, and permit limited simultaneous crossposting to
rec.radio.amateur.moderated and one other unmoderated
amateur-radio-related discussion newsgroup. After a successful trial |
period (90 days, through early July 2009), we decided to adopt this |
change permanently. |

Approved rec.radio.amateur.* newsgroups are those that are currently
listed in the latest version of the "List of Big Eight Newsgroups" which
is crossposted monthly to news.announce.newgroups, news.groups, and
news.lists.misc.

Approved alt.radio.amateur.* and alt.ham-radio.* newsgroups are those
that have been created consistent with the suggestions in "So You Want
to Create an Alt Newsgroup" at:

http://www.faqs.org/faqs/alt-creation-guide/

Approved regional hierarchy newsgroups are those that contain either
"radio.amateur" or "ham-radio" in their names, including
uk.radio.amateur and aus.radio.amateur.misc.

We will make every reasonable effort to keep our list of approved
newsgroups up-to-date. In case we have overlooked any, and a submission
is rejected in error as a result, the rejected submitter can E-mail us
at our administrative contact address (in the signature at the bottom of
this article, and the default Reply-To for the rejection message)
requesting that it be added, and that the article be approved. We may
still choose to reject articles crossposted to any alt.* newsgroup with
an inappropriate name, including obscene language, embedded
name-calling, or encouragement of unlawful conduct.
```

Please direct any comments, questions, or criticisms to
rec-radio-amateur-moderated-request@panix.com.

167. Weekly Highlights of Solar and Geomagnetic Activity, 26 November - 02 December 2012

Newsgroup: rec.radio.amateur.space
Date: 2012-12-03 16:30:07 UTC
From: SWPC.Webmaster@noaa.gov
Message-ID: <20121203163001.AA24133C99@panix2.panix.com>
Source record: 67
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.dx,rec.radio.amateur.space,rec.radio.shortwave,rec.radio.info

```
:Product: Weekly Highlights and Forecasts
:Issued: 2012 Dec 03 1338 UTC
# Prepared by the US Dept. of Commerce, NOAA, Space Weather Prediction Center
# Product description and SWPC contact on the Web
# http://www.swpc.noaa.gov/weekly.html
#
# Weekly Highlights and Forecasts
#
Highlights of Solar and Geomagnetic Activity
26 November - 02 December 2012

Solar activity reached moderate levels this week with a total of
three M-class events, two of which came from Region 1620 (S12, L=97,
class/area=Ekc/420 on 28 November). This region appeared on 20
November and remained relatively small and stable for the first six
days. On 26 November, it more than quadrupled in size (to 240 mil)
and almost doubled in spot count (to 23). The following day it
produced the first of two M-class events, an M1/Sf on 27/2126 UTC.
By this time it had evolved to a beta-gamma-delta magnetic
configuration which it would maintain for the following two days.
The rapid growth continued and Region 1620 reached 420 mils on 28
November when it produced an M2/1f event at 2136 UTC. Following this
second M-class event, the region began to decay and produced only
occasional C-class events until it crossed the west limb on 01
December.

The remaining M-class flare was attributed to Region 1618 (N08,
L=135, class/area=Ekc/450 on 23 November). This region produced
three M-class flares in the week prior. This week it only managed to
produce one, an M1/Sf on 27 November at 1557 UTC. By this time it
had shrunk to 170 millionths but retained its beta-gamma-delta
magnetic configuration. It rotated around the west limb the next
day.

The largest region on the disk this week was Region 1623 (N09,
L=340, class/area=Eko/450 on 28 November). It produced a C5/Sf flare
on 29/1205 UTC and four other C-flares as its magnetic complexity
increased to a beta-gamma configuration. It retained this complexity
for the next three days but failed to produce any more C-flares.
Nearby, Region 1625 (N15, L=338, class/area=Dso/230 on 29 November)
managed to produce six unremarkable C-flares on its first day. The
remaining regions during the week were relatively quiescent.
```

No proton events were observed at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit was at normal to moderate levels all week.

Geomagnetic field activity was quiet all week with the exception of two unsettled periods. The first was during the 00-03 synoptic period on 26 November most likely associated with a CME that erupted on 23 November. A weak interplanetary shock was observed at the ACE spacecraft at 26/0437 UTC followed by an 8nT sudden impulse at the Boulder magnetometer at 26/0514 UTC. Conditions quickly returned to quiet levels. The second unsettled period was early on 02 December associated with co-rotating interaction region.

Forecast of Solar and Geomagnetic Activity
03 December - 29 December 2012

Solar activity is expected to be at low levels with a chance of isolated M-class flares through the entire forecast period (03-29 December).

No proton events are expected at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit is expected to be at normal levels except during 14-21 December following the onset of a coronal hole high speed stream on 11 December and sustained by another stream which is expected to become geoeffective on 14 December.

Geomagnetic field activity is expected to be at quiet levels for the majority of the forecast period. Unsettled to potentially active levels are expected on 11-12, 14, and 29 December associated with recurrent high speed solar wind streams.

168. Radio Meteor Obs. Bull. November 2012

Newsgroup: rec.radio.amateur.space
Date: 2012-12-06 20:33:36 UTC
From: Chris Steyaert <observations@rmob.org>
Message-ID: <t802c8t1h0f9m0lf0t3jhe10uhl0rgu1o6@4ax.com>
Source record: 68
Cross-posted to: rec.radio.amateur.space,sci.astro.amateur

Radio Meteor Observation Bulletin No. 232 of November 2012 (79 K) is available now as

http://www.rmob.org/rmobtext/rmob1211.txt

More information and the visual presentation of the hourly forward scatter counts can be found on

http://www.rmob.org

Chris

169. ANS-344 AMSAT News Service Weekly Bulletins

Newsgroup: rec.radio.amateur.space
Date: 2012-12-09 15:52:27 UTC
From: JoAnne Maenpaa <k9jkm@comcast.net>
Message-ID: <001201cdd625$2aaf2db0$800d8910$@net>
Source record: 69
Cross-posted to: rec.radio.amateur.space,rec.radio.info

AMSAT NEWS SERVICE
ANS-344

ANS is a free, weekly, news and information service of AMSAT North America, The Radio Amateur Satellite Corporation. ANS reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in designing, building, launching and communicating through analog and digital Amateur Radio satellites.

Please send any amateur satellite news or reports to:
ans-editor@amsat.org

In this edition:

* FITSAT-1 Flashing LED Experiment Scheduled for December 12-13
* V/U/Wx Receive Only Amplifier Available Through AMSAT Store
* AMSAT Office Closed December 6 thru 11
* CO6CBF and EA4CYQ Work Transatlantic via FO-29
* VE to ES DX via AO-7 Mode B
* U.S ARISS Proposal is Live Online
* California K6RPT-12 144.390 FM APRS Balloon Crosses Atlantic
* K6RPT-12 Balloon Lands (ANS Deadline Update!)
* FreeDV Ham Radio Digital Voice Software
* N0D [illegible] Special Event Station for the End of the World
* AMSAT SKN ON OSCAR 2013 IN MEMORY OF W1BIH/PJ9JT
* SkyCube
* Space Station to reposition for science
* Amateur Radio High Altitude Ballooning -- Mission Announcements
* Jose Luis Pe[illegible]a Sanchez EC4TR Seeks North American Contacts
* More Cubesat News

SB SAT @ AMSAT $ANS-344.01
ANS-344 AMSAT News Service Weekly Bulletins

AMSAT News Service Bulletin 344.01
>From AMSAT HQ SILVER SPRING, MD.
December 9, 2012
To All RADIO AMATEURS
BID: $ANS-344.01

FITSAT-1 Flashing LED Experiment Scheduled for December 12-13

On the 26th of November the first experiment of the flashing LEDs on the FITSAT-1 satellite took place. The LEDs were successfully observed in Kurashiki, Japan and Daejeon, Korea.

On December 7 Takushi Tanaka, JA6AVG updated the FITSAT-1 web page
with this information, "As Christmas Eve is full moon, we [will]
start flashing LEDs between 12-13 December."

The FITSAT-1 web page can be found at:
http://www.fit.ac.jp/~tanaka/fitsat.shtml

For the USA
----
12 December 2012
06:14:30 - 06:16:30 UTC

For Europe
----
13 December 2012
22:10:30 - 22:14:30 UTC

Please note that the schedule is subject to change. Binoculars may
be necessary to ensure success in viewing the flashing LEDs. Addi-
tional prediction and tracking tools can be accessed at:
http://www.satflare.com/track.php?q=tsat#MAP

[ANS thanks Takushi Tanaka, JA6AVG for the above information]

V/U/Wx receive Amplifier available through AMSAT store

AMSAT-NA is pleased to announce an inexpensive, broadband VHF/UHF/WX
satellite receive-only preamplifier.

Key features:

Ready to operate--not a kit! Fully assembled, tested, and installed
in a metal enclosure with female BNC connectors on input and output.

It is based on the MAR 7 device, and covers 100 MHz to 500 MHz.
This includes the137 MHz WX, 2M, and 70cm satellite bands.

Operates from +9-15V DC (a fresh 9V battery works great!). Perfect
for portable operations using dual band hand-held Yagis like the
ARROW, Cheap Yagi, etc. Just put it inline on the correct receive
band for operations in either mode U/V or V/U. You won't believe what
you've been missing!

Includes low power (about 5W) protection diode on the input for
accidental transmissions into the input. (This preamp is not RF
switched. It must be protected from inadvertent repeated or high
power transmission RF using a relay or diplexer.)

Full details and schematic can be found in the November/December
2012 AMSAT Journal article by Mark Spencer, WA8SME, or downloaded
from the item in the Hardware section of the AMSAT Store:

http://store.amsat.org/catalog/

The assembled and tested kit is priced at $50 USD plus shipping.

Proceeds from the sale of this item will help fund the AMSAT Fox Family of satellites!

This equipment was developed as part of the ARRL Education and Technology Program.

[ANS thanks Mark Hammond, N8MH for the above information]

AMSAT Office Closed December 6 thru 11

Martha reports that she will be out of the office beginning Thursday, December 6th, and the office will remain closed on 7th, 10th and 11th.

[ANS thanks Martha for the above information]

CO6CBF and EA4CYQ Work Transatlantic via FO-29

On the morning of December 4, CO6CBF Hector Martinez in EL92sd, worked EA4CYQ Juan Antonio in IM78cx.

Hector reported on the AMSAT-BB
"I had looked for intercontinental contacts before but it had been very hard for me. Now, running my new donated satellite gear I am able to work FO-29 until 0 degree in any direction. It was my third attempt and was successful!

Cubans cannot operate on AO-7 mode B due to a 432MHz restriction in our country, so we have only a few chances on FO-29 every five months when the satellite is getting close to apogee. Juan Antonio and I had a two minutes window and we had enough time to interchange reports, grids and greetings.

The contact is included in John Papay's recording of the pass: http://www.papays.com/sat/FO-29_04Dec2012_140930z.mp3

Thanks very much to Juan Antonio EA4CYQ for the great contact and to John K8YSE for look for us and record the contact!

Right Now, FO-29 has a big footprint in the morning passes. Please, if you are into the footprint and want to try a long contact, just drop me an email directly. I will try until have a contact with you."

[ANS thanks Hector for the above information]

VE to ES DX via AO-7 Mode B

Randy Morden, VE6RGU, reported on the AMSAT-BB December 6,
"I was quite surprised (Tuesday) to work Neil Viskov, ES6DO in Estonia just before 18:00Z on AO-7 mode B.

I was listening to that pass with the hopes of working a few UK stations I heard a few days ago, and was just about to shut the rig down at the end of the pass, when I heard a CW station calling CQ. At first I though it was an Irish station with an EI prefix, but two dits turned out to be three - ES rather than EI! With less than one minute to make the contact on that pass, it all worked out with a new grid and new DX in my log, and Neil's first VE QSO. Many thanks Neil!"

[ANS thanks Randy for the above information]

U.S ARISS Proposal is Live Online

NASA is now accepting proposals from U.S. schools, museums, science centers and community youth organizations, individually or working together, to host an Amateur Radio on the International Space Station contact between May 1, 2013 and November 1, 2013.

To maximize these radio contact opportunities, NASA is looking for organizations that will draw large numbers of participants and integrate the contact into a well-developed education plan. Radio contacts are approximately 10 minutes in length. Proposals are due January 28, 2013.

The NASA ARISS page is live! Spread the word. U.S organizations can now access the planning guide and proposal form online at: http://www.nasa.gov/education/tfs/ariss. Dates and times of the online information sessions are also on the website.

Interested parties should visit the website to obtain complete information including how the technology works, what is expected of the host organization and how to submit the proposal form.

[ANS thanks Trinesha M. Dixon, Teaching From Space Education Specialist at the NASA Johnson Space Center for the above information]

California K6RPT-12 144.390 FM APRS Balloon Crosses Atlantic

Amateur radio stations from the UK to the Azores were listening for the transatlantic balloon K6RPT-12 on 144.390 MHz FM.

As of Tuesday 2230 UT no reports of the balloon had been received since it left radio range of Newfoundland at 0350 UT. The last APRS reports indicated it was starting to drift south and slow down. When it left the USA it was traveling at over 300 km an hour, however, it may well have slowed considerably since then possibly to as little as 90 kmh.

The payload is designed for over 60 hours of flight.

The K6RPT-12 144.390 MHz APRS balloon successfully crossed the Atllantic and landed in Morocco on Wednesday morning.

After its epic journey across the Atlantic the APRS signals were
picked up by Spanish stations. It was last heard at 2012-12-05
09:22:31z descending rapidly, indicating that the balloon had burst.

The last recorded position was 34°25.75' N 3°58.96' W. It is
believed
there are less than 150 radio amateurs in Morocco and no known APRS
stations, so the balloon may never be recovered.

See the K6RPT-12 APRS Track at
http://aprs.fi/#!call=K6RPT-12&timerange=4800

California Near Space Project
http://www.californianearspaceproject.com/

Twitter http://twitter.com/k6rpt

[ANS thanks Southgate, the California Near Space Project and JoAnne
Maenpaa for the
above information]

FreeDV Ham Radio Digital Voice Software

FreeDV is an application for Windows and Linux that allows any HF
SSB radio to be used for digital voice mode wita bandwidth of
just 1.1 kHz. Speech is compressed down to 1400 bit/s then modulat-
ed onto a 1100 Hz wide QPSK signal which is sent to the Mic input
of a SSB radio. On receive, the signal is received by the SSB radio,
then demodulated and decoded by FreeDV.

Features:
+ Codec 2 voice coder and FDMDV modem
+ 50 baud 14 QPSK voice data
+ 1 Center BPSK carrier with 2x power for fast and robust synchroni-
zation.
+ 1.125 kHz spectrum bandwidth (half SSB) with 75 Hz carrier spacing
+ 1400 bit/s data rate with 1375 bit/s open source Codec 2 voice
coding and 25 bit/s text for call sign ID
+ No interleaving in time or FEC philosophy resulting in low latency,
fast synchronization and quick recovery from fades.
+ 44.1 or 48kHz sample rate sound card compatible

FreeDV, the new HF digital audio program for Radio Amateurs:
http://www.youtube.com/watch?v=yn0NEcNHs&feature=player_embedded

Watch when it's switched to analog SSB. The SSB bandwidth is about
3 times that of the digital audio. Also note the diagonal black
streaks across the waterfall display. That's fading, probably from
two reflections arriving out of phase. The ID on the bottom is com-
ing in during the silent periods between words.

This software is Open Source, and uses Codec2. This Codec was pre-
sented by Bruce Robertson, VE9QRP at the 2012 AMSAT Space Symposium

in Orlando, Florida.

See http://freedv.org/

[ANS thanks Southgate and FreeDV for the above information]

N0D ? Special Event Station for the End of the World
Expands to the Final Frontier!

Houston, Texas December 4, 2012: According to one of the three Mayan Calendars, the End of the world will occur on Dec 21, 2012. To celebrate this literally once in a lifetime event, Special Event Station N0D (Now Zero Days) will be activated for the period December 15, 2012 through December 20, 2012. December 21, the day of destruction, we will be on the air as long as possible. December 22nd is a little iffy right now.

After all, it is the end of the world, so why not include the Final Frontier? In celebration, experienced satellite operators Allen Mattis, N5AFV, and Andy MacAllister, W5ACM, who are members of the N0D team, will be working available satellite passes beginning December 15th, 2012, through the end of the world and possibly beyond until December 22nd. The team will be using the Official Doomsday call sign, N0D.

In addition, the South Texas Balloon Launch Team will launch the Doomsday Balloon, BLT-32 To the End of the World and Float, to prepare the world for its demise! The launch is scheduled for Saturday Dec 15th at 4 PM from Covey Trails Airport in Fulshear, Texas. BLT-32 is designed as a ?floater? with hopes that it will reach Europe before the end of the world. APRS telemetry and beacons on the balloon will also be using the Official Doomsday call sign, N0D. Details about the Doomsday balloon are available at http://www.w5acm.net/b32.html.

N0D will also be active on the HF bands throughout the event. Further information is available at www.nowzerodays.com. You may register on the website to become an official Doomsday station. Over 575 stations have already done so. QSL information for N0D is with SASE via KK5W but better wait untill after Doomsday, if we are still around.

NO Backup Date ? It?s all or NOTHING!

[ANS thanks Allen N5AFV for the above information]

AMSAT SKN ON OSCAR 2013 IN MEMORY OF W1BIH/PJ9JT

You are cordially invited to participate in Straight Key Night on OSCAR 2013, conducted by AMSAT for all radio amateurs throughout the

world. This year's event is dedicated to the memory of John Thompson, W1BIH/PJ9JT, who passed away in 2012, aged 96. Although known primarily as an HF DXer and contester, John was also active on OSCAR, mostly on CW.

As always, SKN on OSCAR is simple and informal. Just operate CW through one or more satellites on 1 January 2013 (0000 to 2400 UTC), using a straight hand key. There is no need to send in a log, but all participants are encouraged to nominate someone they worked for Best Fist. Your nominee need not have the best fist of anyone you heard, only of those you worked. Send your nomination to w2rs at amsat.org. A list of those nominated will appear in ANS in early February.

[ANS thanks Ray Soifer for the above information]

Watch and Listen for the Geminid Meteor Shower This Week

The Geminid Meteor Shower is the grand finale of astronomical events in 2012 and is usually the most reliable and prolific of the annual meteor showers.

This year we are in for a special treat as the Moon will be absent when the Geminids are at their peak on the evening of the 12th/13th of December. This means that the sky should be at its darkest when the shower is expected, and many more of the fainter meteors will be visible.

Meteor pings can be heard via internet streaming as the Air Force Space Surveillance Radar, scanning the skies above Texas, creates the "radar fence". When a meteor or satellite passes over the fac-ility--ping!--there is an echo. This live audio feed can be found at: http://spaceweatherradio.com/

[ANS thanks UniverseToday.com and SpaceWeatherRadio.com for the above information]

SkyCube: The Satellite
http://www.southernstars.com/skycube/satellite.html

SkyCube: a day in the life
http://tinyurl.com/a8xro6z

SkyCube uses Kickstarter for Funding
http://www.uk.amsat.org/?p=55

[ANS thanks Southgate ARC for the above information]

Space Station to reposition for science

The International Space Station will reposition itself for a better view of the sun, the first-ever attitude change for scientific reasons alone, officials say.

http://tinyurl.com/bsw4wg2

[ANS thanks Space Travel for the above information]

AMATEUR RADIO HIGH ALTITUDE BALLOONING -- MISSION ANNOUNCEMENTS

http://arhab.org/hab_launch_list.php

[ANS thanks AMATEUR RADIO HIGH ALTITUDE BALLOONING for the above information]

Jose Luis Pe&#65533;a Sanchez EC4TR Seeks North American Contacts from IN80er in Spain

Luis, EC4TR, is looking for North American stations with whom to set up satellite schedules. His grid in IN80er. Email him at his qrz.com email address if you would like to contact him. FO-29 is over 1300km high during morning passes over the Atlantic now. AO-7 is always around 1450km and is in Mode B on odd days during December.

[ANS thanks John Papay K8YSE for the above information]

More CubeSat News

The UK Space Agency will be running a free CubeSat Community Workshop at Milton Keynes on January 22 that will include discussion of plans for UKube-2.

See http://www.uk.amsat.org/?p782

Also on the AMSAT-UK site:

Pictures released of UKube-1 CubeSat
http://www.uk.amsat.org/?p786

Australian Radio Ham&#65533;s Spacecraft Missions
http://www.uk.amsat.org/?p745

[ANS thanks Trevor M5AKA for the above information]

/EX

Please share you copy with an educator near you.

In addition to regular membership, AMSAT offers membership in the President's Club. Members of the President's Club, as sustaining

donors to AMSAT Project Funds, will be eligible to receive additional benefits. Application forms are available from the AMSAT Office.

Primary and secondary school students are eligible for membership at one-half the standard yearly rate. Post-secondary school students enrolled in at least half time status shall be eligible for the student rate for a maximum of 6 post-secondary years in this status. Contact Martha at the AMSAT Office for additional student membership information.

73,
This week's ANS Editor,
E.Mike McCardel, KC8YLD
kc8yld at amsat dot org

170. Weekly Highlights of Solar and Geomagnetic Activity, 03 - 09 December 2012

Newsgroup: rec.radio.amateur.space
Date: 2012-12-10 16:30:10 UTC
From: SWPC.Webmaster@noaa.gov
Message-ID: <20121210163001.7722A33C52@panix2.panix.com>
Source record: 70
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.dx,rec.radio.amateur.space,rec.radio.shortwave,rec.radio.info

```
:Product: Weekly Highlights and Forecasts
:Issued: 2012 Dec 10 1124 UTC
# Prepared by the US Dept. of Commerce, NOAA, Space Weather Prediction Center
# Product description and SWPC contact on the Web
# http://www.swpc.noaa.gov/weekly.html
#
# Weekly Highlights and Forecasts
#
Highlights of Solar and Geomagnetic Activity
03 - 09 December 2012

Solar activity reached low levels this week with a total of four
C-class events, the largest of which was a C3 event at 2121 UTC that
came from region 1621 (N16,L=19, clas/area Axx/10 on 07 December.
This region appeared on 24 November as an Alpha class region and
slowly grew in size (to 130 mil), becoming a Beta class region which
it maintained for 8 days. The region began to decay and produced the
C-class event after it crossed the western limb on 07 December.

No proton events were observed at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit was at
normal levels all week.

Geomagnetic field activity was quiet all week. Solar wind speed
measured 260 km/s - 350 km/s on average with a peak of 459 km/s on
04 December due to the arrival of a coronal hole high speed stream.
The maximum southward component of Bz reached -10.9 nT at 04/0440
UTC, the total IMF reached 13.0 nT at 03/1958 UTC. There were no
CMEs with a significant earthward component during this week.

Forecast of Solar and Geomagnetic Activity
10 December - 05 January 2013

Solar activity is expected to be at low levels with a chance of
isolated M-class flares through the entire forecast period (10
December 2012 - 05 January 2013).

No proton events are expected at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit is
expected to be at normal levels except during 14-21 December
following the onset of a coronal hole high speed stream on 14
December and sustained by another stream which is expected to become
geoeffective on 15 December.
```

Geomagnetic field activity is expected to be at quiet levels for the majority of the forecast period. An isolated period of unsettled levels is expected on 17 December with elevated ambient background solar wind speeds and again on 29 December associated with a recurrent solar sector boundary crossing.

171. Crossposting Permitted to rec.radio.amateur.moderated

Newsgroup: rec.radio.amateur.space
Date: 2012-12-15 07:00:03 UTC
From: rram@panix.com
Message-ID: <radio/ham-radio/moderated/crossposting-1-1355554802@panix.com>
Source record: 71
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space,rec.radio.info

```
Posted-By: auto-faq 3.3.2 beta (PGPMoose V2.0, Perl 5.005)
Archive-name: radio/ham-radio/moderated/crossposting
Revision: 1.2 2011/11/02 04:08:53
Posting-Frequency: posted twice monthly
URL: http://www.panix.com/~rram/usenet/rram/index.html

Changes followed by "|".

After a 30-day public discussion and feedback period to gauge reader
opinions in March of 2009:

http://groups.google.com/group/rec.radio.amateur.moderated/browse_thread/thread/d7d337db35
f23326

the rec.radio.amateur.moderated Moderation Team had decided to consider |
amending its charter, and permit limited simultaneous crossposting to
rec.radio.amateur.moderated and one other unmoderated
amateur-radio-related discussion newsgroup. After a successful trial |
period (90 days, through early July 2009), we decided to adopt this |
change permanently. |

Approved rec.radio.amateur.* newsgroups are those that are currently
listed in the latest version of the "List of Big Eight Newsgroups" which
is crossposted monthly to news.announce.newgroups, news.groups, and
news.lists.misc.

Approved alt.radio.amateur.* and alt.ham-radio.* newsgroups are those
that have been created consistent with the suggestions in "So You Want
to Create an Alt Newsgroup" at:

http://www.faqs.org/faqs/alt-creation-guide/

Approved regional hierarchy newsgroups are those that contain either
"radio.amateur" or "ham-radio" in their names, including
uk.radio.amateur and aus.radio.amateur.misc.

We will make every reasonable effort to keep our list of approved
newsgroups up-to-date. In case we have overlooked any, and a submission
is rejected in error as a result, the rejected submitter can E-mail us
at our administrative contact address (in the signature at the bottom of
this article, and the default Reply-To for the rejection message)
requesting that it be added, and that the article be approved. We may
still choose to reject articles crossposted to any alt.* newsgroup with
an inappropriate name, including obscene language, embedded
name-calling, or encouragement of unlawful conduct.
```

Please direct any comments, questions, or criticisms to
rec-radio-amateur-moderated-request@panix.com.

172. ANS-351 AMSAT News Service Weekly Bulletins

Newsgroup: rec.radio.amateur.space
Date: 2012-12-16 02:28:37 UTC
From: JoAnne Maenpaa <k9jkm@comcast.net>
Message-ID: <001001cddb35$04f30f00$0ed92d00$@net>
Source record: 72
Cross-posted to: rec.radio.amateur.space,rec.radio.info

AMSAT NEWS SERVICE
ANS-351

ANS is a free, weekly, news and information service of AMSAT North America, The Radio Amateur Satellite Corporation. ANS reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in designing, building, launching and communicating through analog and digital Amateur Radio satellites.

Please send any amateur satellite news or reports to:
ans-editor at amsat.org

In this edition:

* Kline School "Out of This World Experience" Raises $6500 for AMSAT Fox
* AMSAT Submits a Second NASA ELaNa Proposal
* AMSAT SKN ON OSCAR 2013 In Memory of W1BIH/PJ9JT
* FITSAT-1 LED Beacon Seen From Space
* QST October 2012 SatCat Interface for FT-817 For Sale at ARRL
* V/U/Wx Receive Pre-Amplifier Available Through AMSAT Store
* WA8SME Receives YASME Foundation Excellence Award
* NASA TV Coverage Set for December 19 Soyuz Space Station Crew Launch
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* Carrier Detected on LO-19 Beacon Frequency
* December 17 Lunar Impact Final Experiment for GRAIL Probes
* Satellite Shorts From All Over

SB SAT @ AMSAT $ANS-351.01
ANS-351 AMSAT News Service Weekly Bulletins

AMSAT News Service Bulletin 351.01
>From AMSAT HQ SILVER SPRING, MD.
December 16, 2012
To All RADIO AMATEURS
BID: $ANS-351.01

Kline School "Out of This World Experience" Raises $6500 for AMSAT Fox

Kline School had the distinction of being invited to contact Commander Kevin Ford aboard the International Space Station on Thursday, December 6 via an ARISS contact.

During this live event, students had the opportunity to have their questions answered by an astronaut living in space. In preparation for the ARISS contact, students engaged in NASA class lessons on Building the ISS and What Life is Like Aboard the ISS. They studied experiments and tasks taking place on the ISS to help formulate expedition related questions. Students also learned about the forms and sources of energy that help to sustain the station.

Teachers at Kline School wrote, "We think of the ARISS contact as the real world application of our students' studies of science, technology, engineering and math (STEM)".

Reaching beyond content, students launched a Spell-A-Thon and raised $6,500 dollars to purchase six-sets of solar panels to help AMSAT fly Fox-1, an amateur radio satellite. The solar panels will provide power to the satellite while in space. Students are proud of their AMSAT membership, too.

ARISS is a cooperative venture of the National Aeronautics and Space Administration (NASA), the American Radio Relay League (ARRL), the Radio Amateur Satellite Corporation (AMSAT), and other worldwide amateur radio groups and international space agencies. These ARISS partners organize scheduled 10-minute interactive contacts via amateur radio with the help of experienced amateur radio volunteers.

More information and a photo will be published in an upcoming issue of the AMSAT Journal.

For more information about Kline School's ISS contact and related events visit: http://www.klineschool.com
https://www.facebook.com/pages/Kline-School/153838291839

[ANS thanks the Kline School for the above information]

AMSAT Submits a Second NASA ELaNa Proposal

The official name of the project is "RadFxSat" and it is a joint project with the Institute for Space and Defense Electronics (ISDE) at Vanderbilt University. AMSAT is providing the satellite bus (Fox-1B) and ISDE is providing the experiment payload. The primary mission is to advance the state of the art in understanding the effects of space radiation on electronic components.

This is the first AMSAT satellite with science as the primary mission. This is very exciting as it potentially opens up new launch opportunities. Since the data downlink and power required by the experiment are modest, we expect to be able to operate the science payload and the ham radio transponder simultaneously.

The satellite hardware design is the same as Fox-1 but there will be substantial AMSAT work in systems engineering, project management, software development, satellite construction and testing.

We requested a launch in the 2nd half of 2014 to a 650 km sun-synchronous orbit which is the same as we requested for Fox-1. As in our previous proposal, we also noted that the mission requirements can be met over a wide range of orbits. The key elements are the need for a high enough apogee to provide significant exposure to space radiation and a minimum 10 year orbit lifetime.

While there can be no guarantee that our proposal will be accepted by NASA, we believe that in its 241 pages (!) we have made a strong case.

NASA is expected to announce the accepted proposals at the end of January 2013.

[ANS thanks AMSAT Vice-President Engineering Tony Monteiro, AA2TX for the above information]

AMSAT SKN ON OSCAR 2013 In Memory of W1BIH/PJ9JT

You are cordially invited to participate in Straight Key Night on OSCAR 2013, conducted by AMSAT for all radio amateurs throughout the world. This year's event is dedicated to the memory of John Thompson, W1BIH/PJ9JT, who passed away in 2012, aged 96. Although known primarily as an HF DXer and contester, John was also active on OSCAR, mostly on CW.

As always, SKN on OSCAR is simple and informal. Just operate CW through one or more satellites on 1 January 2013 (0000 to 2400 UTC), using a straight hand key. There is no need to send in a log, but all participants are encouraged to nominate someone they worked for Best Fist. Your nominee need not have the best fist of anyone you heard, only of those you worked. Send your nomination to w2rs at amsat.org. A list of those nominated will appear in ANS and the AMSAT Journal.

[ANS thanks Ray Soifer for the above information]

FITSAT-1 LED Beacon Seen From Space

A test of the FITSAT-1 LED optical beacon that took place on December 11 GMT over Japan was successful.

FITSAT-1 flashed the optical beacon over the USA on December 12 and on December 13 over the British Isles and Europe. No reports of optical detection were received from the USA or Europe.

In a clear night sky with no moon the FITSAT-1 optical beacon is visible using binoculars.

The latest FITSAT-1 satellite news is posted at:
http://www.fit.ac.jp/~tanaka/fitsat.shtml

A photo of the visible beacon is posted at:
http://www.jinkou-eisei.jp/FITSAT/images/121212_watanabe.jpg
http://www.jinkou-eisei.jp/FITSAT/images/121211_m.jpg

FITSAT-1 is a CubeSat developed by students at the Fukuoka Institute of Technology (FIT) in Japan. As well as the optical LED experiment the satellite carries an amateur radio payloads: a CW beacon on 437.250 MHz, a telemetry beacon on 437.445 MHz and a high-speed data downlink on 5840.0 MHz.

[ANS thanks the FITSAT-1 team for the above information]

QST October 2012 SatCat Interface for FT-817 For Sale at ARRL

The satellite computer aided tuning interface described in October, 2012 QST (pp. 40-43) for use with SatPC32 and the Yaesu FT-817 radio is being offered for sale by the ARRL Education & Technology Program (ETP).

The interface was developed by Mark Spencer, WA8SME, as part of resource development for the ARRL ETP and is priced to recover cost plus a small increment toward development as well as a cost share donation to AMSAT. The interface is fully described in the article published in October 2012 QST on pp. 40-43.

You may order the board and programmed PIC for a cost of $20; to order the full kit including all of the parts, the cost is $35.

To order please send the following either by mail or email as follows:

+ Your name and shipping address
+ Phone number and email address
+ Item you are requesting
+ Enclose a check for the appropriate amount, payable to ARRL ETP, sent to attention of ARRL Education Services

Send orders to:

ARRL Education Services, ATTN: Amy Strickland
225 Main Street
Newington, CT 06111

Please contact Amy in ARRL Education Services at astrickland@arrl.org with any questions about ordering.

Please contact Mark Spencer at mspencer@arrl.org with questions about the interface design and specifications.

[ANS thanks Mark Spencer, WA8SME for the above information]

V/U/Wx Receive Pre-Amplifier Available Through AMSAT Store

AMSAT-NA is pleased to announce an inexpensive, broadband VHF/UHF/WX satellite receive-only preamplifier.

Key features:

Ready to operate--not a kit! Fully assembled, tested, and installed in a metal enclosure with female BNC connectors on input and output.

It is based on the MAR 7 device, and covers 100 MHz to 500 MHz. This includes the137 MHz WX, 2M, and 70cm satellite bands.

Operates from +9-15V DC (a fresh 9V battery works great!). Perfect for portable operations using dual band hand-held Yagis like the ARROW, Cheap Yagi, etc. Just put it inline on the correct receive band for operations in either mode U/V or V/U. You won't believe what you've been missing!

Includes low power (about 5W) protection diode on the input for accidental transmissions into the input. (This preamp is not RF switched. It must be protected from inadvertent repeated or high power transmission RF using a relay or diplexer.)

Full details and schematic can be found in the November/December 2012 AMSAT Journal article by Mark Spencer, WA8SME, or downloaded from the item in the Hardware section of the AMSAT Store:

http://store.amsat.org/catalog/

The assembled and tested kit is priced at $50 USD plus shipping.

Proceeds from the sale of this item will help fund the AMSAT Fox Family of satellites!

This equipment was developed as part of the ARRL Education and Technology Program.

[ANS thanks Mark Hammond, N8MH for the above information]

WA8SME Receives YASME Foundation Excellence Award

Mark Spencer, WA8SME, has received the Excellence Award from the YASME Foundation (yasme.org). The following is an excerpt from the OPDX Bulletin 1090, December 10, 2012:

"The Yasme Excellence Award is awarded to individuals who through their own service, creativity, effort and dedication have made a significant contribution to amateur radio. The contribution may be in recognition of technical, operating or organizational achievement, as all three are necessary for amateur radio to grow and prosper. The Yasme Excellence Award is in the form of a cash grant and an individually-engraved crystal globe."

The Board of Directors of The Yasme Foundation announced the award:

Mark Spencer, WA8SME, for his instrumental work in the ARRL Teachers Institute and other training efforts, development of PIC microcontroller projects and books for amateurs, and work with leaders in student and scientific teams applying amateur radio to scientific projects and experiments.

AMSAT congratulates to Mark Spencer WA8SME, recipient of the YASME Foundation Excellence Award

[ANS thanks John Papay, K8YSE and YASME Foundation for the above information]

NASA TV Coverage Set for December 19 Soyuz Space Station Crew Launch

NASA Television will provide live coverage of the December 19 launch and docking of the next crew members to the International Space Station. Two of the crew members have their amateur radio license.

Tom Marshburn, KE5HOC of NASA, Roman Romanenko of the Russian Federal Space Agency (Roscosmos) and Chris Hadfield, KC5RNJ/VA3OOG of the Canadian Space Agency are scheduled to launch to the space station in their Soyuz TMA-07M spacecraft at 6:12 a.m. CST (6:12 p.m. Baikonur time) Wednesday, Dec. 19, from the Baikonur Cosmodrome in Kazakhstan. NASA TV launch coverage will begin at 5 a.m. and include video of that day's activities leading to the crew boarding its spacecraft.

The trio will dock the Soyuz spacecraft to the station's Rassvet module at 8:10 a.m. Friday, Dec. 21. NASA TV coverage of docking begins at 7:30 a.m. About three hours later, hatches will open between the Soyuz and the station. Marshburn, Romanenko and Hadfield will be greeted by Expedition 34 Commander Kevin Ford of NASA and flight engineers Oleg Novitskiy and Evgeny Tarelkin of Roscosmos, who have been living and working on the orbiting laboratory since late October. NASA TV's hatch opening coverage begins at 10:15 a.m.

Marshburn, Romanenko and Hadfield will remain aboard the station until

May 2013. Ford, Novitskiy and Tarelkin will return to Earth March 15, leaving Hadfield as the first Canadian commander of the space station.

The full schedule of the Soyuz prelaunch, launch and docking coverage includes (all times Central USA which is UTC-6):

Friday, Dec. 14
1 p.m. -- Video file of Expedition 34/35 crew activities in Baikonur, Kazakhstan

Monday, Dec. 17
11 a.m. -- Video file of Expedition 34/35 spacecraft encapsulation, rocket mating and rollout in Baikonur, Kazakhstan

Tuesday, Dec. 18
11 a.m. -- Video file of Expedition 34/35 Russian State Commission

meeting and final pre-launch crew news conference in
Baikonur, Kazakhstan

Wednesday, Dec. 19
5 a.m. -- Expedition 34/35 launch coverage (launch at 6:12 a.m.;
includes video of the crew's pre-launch activities at
5:15 a.m.)
9 a.m. -- Video file of Expedition 34/35 pre-launch, launch and
post-launch interviews

Friday Dec. 21
7:30 a.m. -- Expedition 34/35 docking coverage; docking at 8:10 a.m.
followed by the post-docking news conference from Mis-
sion Control in Korolev, Russia
10:15 a.m. - Expedition 34/35 hatch opening and welcoming ceremony
(hatch opening at 10:45 a.m.)
1 p.m. -- Video file of Expedition 34/35 docking, hatch opening
and welcoming

For NASA TV streaming video, schedule and downlink information, visit:
http://www.nasa.gov/ntv

[ANS thanks NASA for the above information]

Receive Satellite Pass Predictions via Your APRS Radio

The KJ4ERJ satserver will send live tracking data to your APRS
radio anywhere, anytime.

1. Just send an APRS message to "ISS" (without the quotes) from any
APRS radio (on the national APRS channel).

2. If you are in range of the global APRS network (an IGate nearby)
the satserver will respond with the time to AOS and the direction
of AOS, max elevation and LOS.

3. This also works for other satellites. For example, send a message
to "FO29" (without the quotes) and get its prediciton for your
location.

4. The satserver will use the last APRS position you have transmit-
ted.

5. To actually work APRS via ISS, you will have to QSY to the ISS
channel 145.825 and change your path to via ARISS for the pass
(instead of the usual WIDE2-2 for terrestrial APRS).

Example of the the types of responses as collected by APRS.FI mes-
sages page are posted at:
http://aprs.fi/?c=message&limit=25&call=ISS

For a full description, see: http://aprsisce.wikidot.com/doc:satsrv

[ANS thanks Bob Bruninga, WB4APR for the above information]

Carrier Detected on LO-19 Beacon Frequency

Mark Hammond, N8MH reports that LO-19, non-operational for amateur radio use, is still transmitting a very weak continuous carrier on its former 437.1250 MHz CW Mode U TLM beacon frequency.

He wrote, "This weekend I listened again for LO-19. I could always hear a very weak continuous carrier (actually, first saw it using audio FFT software). Yesterday (12/9/12) on a high 50-ish degree elevation pass, it was there. It's right on frequency, right on time with AOS/LOS, the Doppler correction from SatPC32 is right on target. The bird was in daylight, but I expect its batteries are still good so I bet you can hear it in eclipse as well. You might have fun listening for it, as a weak signal source. If you can hear LO-19's carrier, your system is pretty up to snuff. Or, use some audio spectrum software and you can "see" the carrier even if you can't hear it on your speaker."

Additional LO-19 reception reports are confirmed by WA8SME, K8YSE, and OZ1MY.

[ANS thanks Mark Hammond, N8MH for the above information]

December 17 Lunar Impact Final Experiment for GRAIL Probes

Twin lunar-orbiting NASA spacecraft that have allowed scientists to learn more about the internal structure and composition of the moon are being prepared for their controlled descent and impact on a mountain near the moon's north pole at about 2:28 p.m. PST (5:28 p.m. EST) Monday, Dec. 17.

The mountain where the two spacecraft will make contact is located near a crater named Goldschmidt. Both spacecraft have been flying in formation around the moon since Jan. 1, 2012. The first probe will go down, at 2:28:40 p.m. The second probe will about 20 seconds later.

Both spacecraft will hit the surface at 3,760 mph (1.7 kilometers per second). No imagery of the impact is expected because the region will be in shadow at the time.

The probes will conduct one final experiment before their mission ends. They will fire their main engines until their propellant tanks are empty to determine precisely the amount of fuel remaining in their tanks. This will help NASA engineers validate fuel consumption computer models to improve predictions of fuel needs for future missions.

Because the exact amount of fuel remaining aboard each spacecraft is unknown, mission navigators and engineers designed the depletion burn to allow the probes to descend gradually for several hours and skim the surface of the moon until the elevated terrain of the target mountain gets in their way.

For more information about GRAIL, visit: http://www.nasa.gov/grail
SpaceRef.com posted this news at:
http://spaceref.com/news/viewpr.html?pid=39537

A video simulation of the impact is posted at:
http://www.youtube.com/watch?feature=player_embedded&v=U2OKpf7fo_w

[ANS thanks SpaceRef.com for the above information]

Satellite Shorts From All Over

+ The NASA Small Spacecraft Technology Program open solicitation from for the Flight Opportunities Program extended the proposal submission deadline to January 17, 2013 for the next selection of projects to fly on parabolic aircraft flights, high altitude balloon flights, and suborbital flights. No funding is provided for project or payload development, the flight opportunity is provided at no cost to the research team. For more information please see: https://flightopportunities.nasa.gov/afo
An article providing examples of recent flight testing is posted at: http://tinyurl.com/NASA-FlightTest (nasa.gov) - Via N8PK

+ Flex has an interesting article on using two rigs for full duplex operations using SATPC32:
http://support.flexradio.com/Downloads.aspx?fr=1
Look for: A Full-Duplex VHF-UHF Satellite System using FLEX radios (via WA4SCA)

+ A recording of the December 9 AMSAT-UK 80M and 40M nets has been posted at: http://www.ham-radio.ch/kits/sdr-radio.com/mp3/

+ Luci, 9A1Z, is looking to work North America on AO-7 Mode B on CW. If you are interested in working him, please send an email to his qrz.com address for a sked. He is in JN86. (via K8YSE)

+ Photos of the new Russian Multi-purpose Laboratory Module (MLM) or "Nauka" for the International Space Station can be seen at:.
http://www.spaceref.com/news/viewnews.html?id=1691
The Nauka MLM is a modified version of Functional Cargo Block (FGB-2). It will dock at the Zvezda Service Module's nadir (earth facing) port and will replace the current PIRS module. PIRS will be allowed to renter Earth's atmosphere. Launch is planned for 2013 or 2014. Nauka will serve as Russia's primary research module but will also have stowage and crew work areas.

+ Last week the Smithsonian issued the following statement regarding the passing of a unique ISS crewmember: "It is with sadness that

we announce the death of Nefertiti, the "Spidernaut." This morning (Dec 3), before museum hours, a member of the Insect Zoo staff discovered Neffi had died of natural causes. Neffi lived for 10 months. She traveled over 40 million miles while living onboard the International Space Station earlier this year as part of a student-initiated experiment sponsored by NASA. After returning to Earth, Nefertiti went to the Smithsonian National Museum of Natural History's Insect Zoo to live out the remainder of her life. (via AmericanSpace.org)

+ The next Hudson Valley Satcom net will be Thursday, December 20 at 8 PM EST (UTC-5) on the 146.97 MHz MBARC Repeater (PL 100). An echolink connection is available on the N2EYH-L node. More information at: http://www.hvsatcom.org. (Stu, WA2BSS)

+ The W5KUB live webcasts are preparing for a December 29 "D-Star Live" show on http://W5KUB.com between 1000-1600 Central US time (UTC-6). Tom says there will be lots of good stuff and special guests. You will be able to ask questions of the experts. The latest news of all W5KUB broadcasts can be found on their Facebook page: https://www.facebook.com/groups/w5kub/ .

+ UniverseToday.com posted a 19 minute video of the Overview Effect showing how the view from space has altered our whole Earth perspective: http://tinyurl.com/Perspective-Video (UniverseToday.com)

+ NASA released a video and images showing the Earth at night taken by a new sensor aboard the NASA-NOAA Suomi National Polar-orbiting Partnership (NPP) satellite:
http://www.nasa.gov/mission_pages/NPP/news/earth-at-night.html

+ The National Air and Space Museum Webcast Archive has several videos available at: http://airandspace.si.edu/webcasts/archive.cfm

+ The NASA Voyager 1 probe has been spotted by the SETI Institute's Allen Telescope Array (ATA) on 8419.62 MHz. The signal processing used to detect this radio signal from the outer edge of our solar system is quite educational, although the site does plug a commercial product not associated with AMSAT:
http://baudline.blogspot.com.es/2012/11/setiquest-voyager-1-redux.html

+ The "Comet Quest" game for iPhone and iPad from NASA's Jet Propulsion Laboratory can be downloaded from the iTunes Apps store at: http://bit.ly/xXhjI7. The game mimics the real Rosetta mission, and enables you to control the spacecraft, drop a lander on a comet's nucleus, then observe and record events. Players must avoid hazards and successfully transmit data to Earth, earning points for each accomplishment.

+ You and the kids can talk to Santa on the radio. Santa Claus will be appearing on 3.916 MHz. There are still a few opportunities to to tell Santa how good you've been and which rig would delight you. All net times are 2030 Central US time UTC-6)

Monday, December 17
Wednesday, December 19
Friday, December 21
Saturday, December 22
Sunday, December 23
Monday, December 24

[ANS thanks everyone for the above information]

/EX

In addition to regular membership, AMSAT offers membership in the President's Club. Members of the President's Club, as sustaining donors to AMSAT Project Funds, will be eligible to receive additional benefits. Application forms are available from the AMSAT Office.

Primary and secondary school students are eligible for membership at one-half the standard yearly rate. Post-secondary school students enrolled in at least half time status shall be eligible for the student rate for a maximum of 6 post-secondary years in this status. Contact Martha at the AMSAT Office for additional student membership information. And with that, please keep in mind the interstellar gas cloud that comprises Sagittarius B contains a billion billion billion (yes, that's three orders of billion) liters of alcohol. If you are doing your mathematics homework please remember to not drink and derive.

73,
This week's ANS Editor,
JoAnne Maenpaa, K9JKM
K9JKM at amsat dot org

173. Weekly Highlights of Solar and Geomagnetic Activity, 10 - 16 December 2012

Newsgroup: rec.radio.amateur.space
Date: 2012-12-17 16:30:06 UTC
From: SWPC.Webmaster@noaa.gov
Message-ID: <20121217163001.CE73433C52@panix2.panix.com>
Source record: 73
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.dx,rec.radio.amateur.space,rec.radio.shortwave,rec.radio.info

```
:Product: Weekly Highlights and Forecasts
:Issued: 2012 Dec 17 1124 UTC
# Prepared by the US Dept. of Commerce, NOAA, Space Weather Prediction Center
# Product description and SWPC contact on the Web
# http://www.swpc.noaa.gov/weekly.html
#
# Weekly Highlights and Forecasts
#
Highlights of Solar and Geomagnetic Activity
10 - 16 December 2012

Solar activity was low. The largest flare of the period came from
Region 1629 (N11, L=240, class/area=Dai/170 on 14 December), a C5/Sf
12/0727Z. Region 1630 (N19, L=253, class/area=Cai/90 on 11
December), also produced a C5 flare on 10/0558Z. The remainder of
the period was dominated by infrequent, low-level C-class activity.
No earth-directed coronal mass ejections were observed during the
week.

A 10 MeV proton enhancement at geosynchronous orbit was observed on
14-15 December. 10 MeV particle flux was slightly elevated beginning
around 14/0900Z. An eruption from the beyond the west limb, in the
southern hemisphere, was visible in STEREO-A EUVI imagery beginning
around 14/1200Z. 10 MeV flux began climbing more steeply around
14/2245Z, reaching a peak of 9.36 pfu at 15/0155Z, just below the S1
threshold of 10 pfu. Flux returned to normal levels over the course
of the next two days.

The greater than 2 MeV electron flux at geosynchronous orbit was at
normal levels throughout the week.

Geomagnetic field activity quiet all week. Solar wind speed at the
ACE spacecraft ranged from around 270 km/s to the near 470 km/s
while Bz was never less than -8 nT. A very weak shock was observed
at the ACE spacecraft at 14/1852Z, and at GOES by 14/1946Z. Isolated
unsettled to minor storm levels were subsequently observed at high
latitudes mid-day on 15 and 16 December.

Forecast of Solar and Geomagnetic Activity
17 December - 12 January 2013

Solar activity is expected to be low with a slight chance for
moderate activity through the forecast period.

No proton events are expected at geosynchronous orbit.
```

The greater than 2 MeV electron flux at geosynchronous orbit is expected to be at background levels except during 19-21 December when a high speed stream is expected to bring the flux to high levels.

Geomagnetic field activity is expected to begin the forecast period at unsettled levels with a slight chance for an active period on 17-18 December as a recurrent coronal hole high speed stream becomes geoeffective. The remainder of the forecast period is expected to be generally quiet barring any geoeffective coronal mass ejections.

174. ANS-358 AMSAT News Service Weekly Bulletins

Newsgroup: rec.radio.amateur.space
Date: 2012-12-23 05:21:56 UTC
From: JoAnne Maenpaa <k9jkm@comcast.net>
Message-ID: <002201cde0cd$66f7b640$34e722c0$@net>
Source record: 74
Cross-posted to: rec.radio.amateur.space,rec.radio.info

AMSAT NEWS SERVICE
ANS-358

ANS is a free, weekly, news and information service of AMSAT North America, The
Radio Amateur Satellite Corporation. ANS reports on the activities of a
worldwide group of Amateur Radio operators who share an active interest in
designing, building, launching and communicating through analog and digital
Amateur Radio satellites.

Please send any amateur satellite news or reports to:

ans-editor@amsat.org

In this edition:

* AMSAT Receives $25,000 Matching Funds Challenge
* AMSAT SKN ON OSCAR 2013 In Memory of W1BIH/PJ9JT
* AMSAT-UK Introduce Electronic (PDF) Membership
* Track Santa with NORAD and AGI on December 24
* Satellite Shorts From All Over

SB SAT @ AMSAT $ANS-358.01
ANS-358 AMSAT News Service Weekly Bulletins

AMSAT News Service Bulletin 358.01
From AMSAT HQ SILVER SPRING, MD.
December 23, 2012
To All RADIO AMATEURS
BID: $ANS-358.01

AMSAT Receives $25,000 Matching Funds Challenge

AMSAT President Barry Baines, WD4ASW says that we have received a matching funds challenge! An anonymous donor will match up to $25,000.00 for Fox. Now is the time to take advantage of this opportunity to double your donation.

Barry wrote, "We end 2012 with significant progress made on the development of Fox-1. A formal proposal to launch Fox-1B was submitted to the NASA ELaNA (Education Launch of Nanosatellites) program on November 19, 2012. NASA is expected to announce in late January or early February 2013 those projects that have been

selected. This is our second ELaNA submission, and we believe the merits of this proposal are even stronger than our original Fox-1 proposal."

Fox-1B will incorporate the flight spare of Fox-1 and is a joint project with the Institute for Space and Defense Electronics (ISDE) at Vanderbilt University. The official project name is "RadFXSat" and the ISDE payload is designed to advance the art of understanding the effects of space radiation on electronic components.

We have requested a launch in the second half of 2014 and a 650 km sun-synchronous orbit that is the same as we requested for Fox-1. As AMSAT VP-Engineering Tony Monteiro, AA2TX points out, "Fox-1B is AMSAT's first satellite with science as its PRIMARY mission. This is very exciting as it potentially opens up new opportunities for free launches. Of course, the satellite also carries a ham radio FM transponder and we expect to be able to operate the transponder and science payload simultaneously." There is significant work to be done in systems engineering, software development, satellite construction and testing to prepare Fox-1B for launch.

During the 30th Annual AMSAT Space Symposium, Tony and the Fox Engineering team gave a number of presentations on the development of Fox-1 with extensive documentation of Fox-1 placed in the Proceedings in order to make this material 'public domain' and thus be able to present it openly. We still expect a launch opportunity in the second half of 2013. To continue these projects, we need the extra resources offered by the matching gift. We hope we can count on your commitment and generosity at this time of giving.

There are several ways you can double your donation to keep Amateur Radio in Space:

Members have received a form in the mail to fill out and return. Please do so today!

Go the AMSAT Store and make a donation

Donate via a PayPal donation sent to martha@amsat.org or click on our PayPal widget at http://www.amsat.org.

Your generous contribution to AMSAT to support AMSAT and Project Fox now will help ensure that our common dream of keeping amateur radio in space will, indeed, become a reality.

[ANS thanks the AMSAT Office for the above information]

AMSAT SKN ON OSCAR 2013 In Memory of W1BIH/PJ9JT

You are cordially invited to participate in Straight Key Night on OSCAR 2013, conducted by AMSAT for all radio amateurs throughout the world. This year's event is dedicated to the memory of John Thompson,

W1BIH/PJ9JT, who passed away in 2012, aged 96. Although known primarily as an HF DXer and contester, John was also active on OSCAR, mostly on CW.

As always, SKN on OSCAR is simple and informal. Just operate CW through one or more satellites on 1 January 2013 (0000 to 2400 UTC), using a straight hand key. There is no need to send in a log, but all participants are encouraged to nominate someone they worked for Best Fist. Your nominee need not have the best fist of anyone you heard, only of those you worked. Send your nomination to w2rs at amsat.org. A list of those nominated will appear in ANS and the AMSAT Journal.

[ANS thanks Ray Soifer, W2RS, for the above information]

AMSAT-UK Introduce Electronic (PDF) Membership

AMSAT-UK is pleased to announce that they can now offer Electronic E-membership at
a reduced rate.

AMSAT-UK initially produced a short bulletin called OSCAR News to give members
advice on amateur satellite communications. Since those early days OSCAR News
has grown in size and the print quality has improved beyond recognition. Today,
OSCAR News is produced as a high-quality quarterly colour A4 magazine consisting
of up to 40 pages of news, information and comment about amateur radio space
communications.

The new E-membership will provide OSCAR News as a downloadable PDF file and
members will have the freedom to read it on their Tablets or Smartphones
anytime, anyplace, anywhere.

An additional advantage is that the PDF should be available for download about
1-2 weeks before the paper copy is posted.

E-membership should be especially beneficial to Overseas members who have
suffered from high postal charges and long delivery times.

The AMSAT-UK membership year runs from January 1 to December 31. Why not take
the opportunity to renew your 2013 membership as an E-member.

Renew your AMSAT-UK membership as an E-member here
http://shop.amsat.org.uk/shop/category_8/Existing-Members-Renewal.html

Join as a new E-member here
http://shop.amsat.org.uk/shop/category_9/Join-Amsat-UK.html

E-members can download their copies of OSCAR News from
http://www.amsatuk.me.uk/on

[ANS thanks AMSAT-UK for the above information]

Track Santa with NORAD and AGI on December 24

'Tis the season for Santa tracking at www.noradsanta.org. The highly popular
NORAD Tracks Santa website will once again follow Santa's annual journey around
the world, updating every three to four minutes and showing new movies captured
by NORAD's special Santa Cams about once an hour.

A long-time supporter of the program, AGI provided NORAD the 2D and 3D Santa
trackers this year. The fun starts at 2.a.m. EST (0700 UTC) on December 24, when website
visitors can watch Santa make preparations for his flight. Then at 6 a.m. EST,
actual tracking begins. So, fire up the computer, grab your family and friends
this December 24 and spend the day tracking Santa at the NORAD Tracks Santa Web
site.

Happy Santa tracking!

[ANS thanks AGI for the above information]

Satellite Shorts From All Over

+ Congratulations to Ken Holland, KC9TTR for attaining his ARRL VUCC Satellite Award #236. Ken thanks all the operators who helped him achieve this, especially portable operators in grids away from home.

+ On December 9 the Breeze-M upper stage of Russia's Proton heavy lift rocket failed, placing Yamal 402 telecommunications satellite into a too-low orbit. News from Russia indicates the satellite was rescued by raising its orbit over four firings of its own engine fuel reserves.

+ The ISS orbit was increased by almost 2.5 kilometers in a test of the station's new emergency debris avoidance system. The new sys-tem, known as the Pre-Determined Debris Avoidance Maneuver (PDAM), addresses the situation where dangerous debris is detected with

little advance warning, down to as little as three hours from the approach. The emergency avoidance maneuver was performed by the engines aboard the Russian Progress freighter docked at the station. The engines can be fired as little as 140 minutes before a dangerous debris approach.

+ Watch a youtube video as Canadian Space Agency Astronaut Chris Hadfield trains in the Soyuz Simulator:
http://www.youtube.com/watch?feature=player_embedded&v=qL1dfdE_RFI
There are good interior views of the Soyuz.

+ NASA released a 64-frame movie of asteroid Toutatis generated from data by Goldstone's Solar System Radar on Dec. 12 and 13:
http://www.youtube.com/watch?feature=player_embedded&v=d7SroliSXuY

[ANS thanks everyone for the above information]

/EX

In addition to regular membership, AMSAT offers membership in the President's Club. Members of the President's Club, as sustaining donors to AMSAT Project Funds, will be eligible to receive additional benefits. Application forms are available from the AMSAT Office.

Primary and secondary school students are eligible for membership at one-half the standard yearly rate. Post-secondary school students enrolled in at least half time status shall be eligible for the student rate for a maximum of 6 post-secondary years in this status. Contact Martha at the AMSAT Office for additional student membership information.

73,
This week's ANS Editor,
Lee McLamb, KU4OS
ku4os at amsat dot org

_____
Via the ANS mailing list courtesy of AMSAT-NA
http://amsat.org/mailman/listinfo/ans

175. Weekly Highlights of Solar and Geomagnetic Activity, 17 - 23 December 2012

Newsgroup: rec.radio.amateur.space
Date: 2012-12-24 16:30:05 UTC
From: SWPC.Webmaster@noaa.gov
Message-ID: <20121224163001.CCA8333C53@panix2.panix.com>
Source record: 75
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.dx,rec.radio.amateur.space,rec.radio.shortwave,rec.radio.info

:Product: Weekly Highlights and Forecasts
:Issued: 2012 Dec 24 1306 UTC
Prepared by the US Dept. of Commerce, NOAA, Space Weather Prediction Center
Product description and SWPC contact on the Web
http://www.swpc.noaa.gov/weekly.html
#
Weekly Highlights and Forecasts
#
Highlights of Solar and Geomagnetic Activity
17 - 23 December 2012

Solar activity was low. Only C1/Sf level flares were observed.
Region 1633 (S07, L=111, class/area=Eki/340 on 17 December) was the
most productive, with eight C1 flares to its credit. Six of these
occurred in the last two days of the week. While it was the largest
region on the disk at the beginning of the week, it ended tied with
Region 1635 (N09, L=64, class/area=Ehi/250 on 21 December) with an
area of 200 microhemispheres. Both Regins 1633 and 1635 ended the
period with beta-gamma magnetic configurations. No earth-directed
CMEs were observed.

No proton events were observed at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit was at
background levels all week.

Geomagnetic field activity was at predominantly quiet levels all
week. There were two exceptions. A positive polarity, southern
hemisphere recurrent coronal hole high speed stream brought
unsettled conditions and the only active period of the week on 17
December. At high latitudes, a single major storm period was
observed. Later in the week, another positive polarity coronal hole
high speed stream, this time in the northern hemisphere, brought a
single unsettled period on 20 December. Activity reached minor storm
levels at high latitudes. During both high speed streams, solar wind
speed reached the low 500 km/s range while the southward component
of the interplanetary magnetic field dipped to approximately -6 nT.

Forecast of Solar and Geomagnetic Activity
24 December - 19 January 2013

Solar activity is expected to be at predominantly low levels during
the forecast period, with a slight chance for an M-class event.

No proton events are expected at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit is expected to be at background levels throughout the period.

Geomagnetic field activity is expected to be at predominantly quiet levels with the exception of 29-30 December and 13 January when recurrent coronal hole high speed streams are expected to bring unsettled conditions.

176. ANS-365 AMSAT News Service Weekly Bulletins

Newsgroup: rec.radio.amateur.space
Date: 2012-12-30 13:16:29 UTC
From: JoAnne Maenpaa <k9jkm@comcast.net>
Message-ID: <000701cde68f$925f8de0$b71ea9a0$@net>
Source record: 76
Cross-posted to: rec.radio.amateur.space,rec.radio.info

AMSAT NEWS SERVICE
ANS-365

ANS is a free, weekly, news and information service of AMSAT North America, The Radio Amateur Satellite Corporation. ANS reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in designing, building, launching and communicating through analog and digital Amateur Radio satellites.

Please send any amateur satellite news or reports to:
ans-editor@amsat.org

In this edition:

* Satellites Removed From Munitions List
* AMSAT SKN ON OSCAR 2013 In Memory of W1BIH/PJ9JT
* Activation of Mawson in Antarctica
* Free CubeSat Workshop in Milton Keynes, England
* SA AMSAT SPACE SYMPOSIUM - CALL FOR PAPERS
* New Satellite Launch Vehicle To Carry CubeSat Swarm in 2013
* UKube-1 Signs up for Launch and Completes Thermal Vacuum Testing
* Dooms Day Press Release, N0D – Special Event Station
* Reminder -- AMSAT Receives $25,000 Matching Funds Challenge
* Satellite Shorts From All Over

SB SAT @ AMSAT $ANS-365.01
ANS-365 AMSAT News Service Weekly Bulletins

AMSAT News Service Bulletin 365.01
>From AMSAT HQ SILVER SPRING, MD.
December 30, 2012
To All RADIO AMATEURS
BID: $ANS-365.01

Satellites Removed From Munitions List

Space Export Control Reform Passes House and Senate
by SpaceMart.com Staff Writers
Washington DC (SPX) Dec 27, 2012

Legislation reforming space-related export control has passed the House and the Senate and is expected to be signed by the President. The legislation is included in the National Defense Authorization Act for Fiscal Year 2013, under Sec. 1261, Removal of Satellites and Related Items from the United States Munitions List (USML).

The legislation contains restrictions, including prohibitions specific to China, North Korea, and any country that is a state sponsor of terrorism.

The passage of this legislation is significant and brings with it the promise that U.S. universities will be better supported in their mission to prepare the workforce needed to design and deploy the space systems of the future and enable the U.S. to remain a leader in space.

Current law had resulted in unintended, adverse impact on U.S. universities, from classroom teaching to student-built CubeSats. Dr. Frederick Tarantino, USRA President, said, "This new legislation strengthens U.S. national security and helps restore the crucial role of university research and education."

The legislation is consistent with the recommendation by the Departments of Defense and State, which, in consultation with the Department of Commerce and intelligence community, concluded in the Section 1248 Report that "Current law forces the U.S. government to continue to protect commonly available satellites and related items on the USML, thus impeding the U.S. ability to work with partners and putting U.S. manufacturers at a disadvantage, but providing no noticeable benefit to national security."

This action by the Congress follows years of effort by USRA's 105-member-university Council of Institutions to inform members of Congress and Administration officials on how appropriate reform will strengthen our national security, better enable U.S. research innovation, and support U.S. workforce development.

USRA joined with industry, including the Satellite Industry Association and the Commercial Spaceflight Federation, in strongly endorsing the Safeguarding United States Satellite Leadership and Security Act of 2012, sponsored by Sen. Michael Bennet (CO).

USRA also worked with the American Association of Universities (AAU) in bringing to the attention of the Congress and the Administration the chilling effect of current space export control on U.S. universities and U.S. students and the critical need for reform.

Professor Scott Pace, a USRA Trustee and Director of the Space Policy Institute of The George Washington University, said, "This is a long overdue change that restores accountability to the Executive Branch while maintaining Congressional oversight. Both sides of the aisle are to be congratulated for this successful outcome."

This report was orginally posted at SpaceMart.com:
http://tinyurl.com/Space-Export-Reform

[ANS thanks SpaceMart.com for the above information]

AMSAT SKN ON OSCAR 2013 In Memory of W1BIH/PJ9JT

You are cordially invited to participate in Straight Key Night on OSCAR 2013, conducted by AMSAT for all radio amateurs throughout the world. This year's event is dedicated to the memory of John Thompson, W1BIH/PJ9JT, who passed away in 2012, aged 96. Although known primarily as an HF DXer and contester, John was also active on OSCAR, mostly on CW.

As always, SKN on OSCAR is simple and informal. Just operate CW through one or more satellites on 1 January 2013 (0000 to 2400 UTC), using a straight hand key. There is no need to send in a log, but all participants are encouraged to nominate someone they worked for Best Fist. Your nominee need not have the best fist of anyone you heard, only of those you worked. Send your nomination to w2rs at amsat.org. A list of those nominated will appear in ANS and the AMSAT Journal.

[ANS thanks Ray Soifer, W2RS for the above information]

Activation of Mawson in Antarctica

Leaving soon on board the ice breaker Aurora Australis for the Australian Antarctic Territory station at Mawson is Craig Hayhow VK6JJJ, who will become VK0JJJ.

He lands on February the 10th, planning to soon after install the 6m beacon VK0RTM and test the propagation on that band.

The main HF rig is a FlexRadio Flex-5000A coupled to an amplifier and feeding a terminated sloping triangle antenna.

On 6m it will be at 400 watts from Mawson thanks to a power amplifier from Steve Gregory VK3ZAZ, who is also the QSL manager, and radiated by a 5-element yagi.

The amateur satellites on 2m and 70cm are to be accessed using a crossed duo-bander.

During the next 12 months Craig VK0JJJ is in Antarctica to work and amateur radio is his leisure time activity.

[ANS thanks Jim Linton VK3PC and the Southgate ARC for the above information]

Free CubeSat Workshop in Milton Keynes, England

The UK Space Agency will be running a free CubeSat Community Work-shop at Milton Keynes on January 22 that will include discussion on plans for UKube-2.

Registration for the workshop is now open. This is a free event and is open to all, hosted by the Open University, Milton Keynes, on 22 January 2013. Please note that space is limited and places will be allocated on a first come, first serve basis.

The event will be an opportunity for the UK Space Agency to provide the cubesat community with an update on its pilot cubesat mission UKube-1, due for launch in early 2013, and to discuss the overall philosophy and timing for the proposed UKube-2 programme. Attendees will have the opportunity to provide input on the future direction of a proposed rolling national programme of cubesat missions.

Parallel breakout sessions will be held as detailed in the downloadable programme. These themes have been selected in response to the common issues raised by members of the community. The findings from each session will feed into a concluding discussion in which follow up actions will be identified.

A copy of the workshop program can be found on-line at:
http://tinyurl.com/UK-Cubesat-Workshop (bis.gov.uk)

UK Space Agency
http://www.bis.gov.uk/ukspaceagency

[ANS thanks Southgate for the above information]

SA AMSAT SPACE SYMPOSIUM - CALL FOR PAPERS

The 2013 SA AMSAT Space Symposium will be held on Saturday, 18 May 2013 at the Innovation Hub in Pretoria. This is the first call for papers. The theme of the symposium is "Satellites - the new Amateur Radio Frontier". If you are planning to present a paper, send a brief outline to saamsat@sarl.org.za by 31 January 2013. For full details and the various deadline dates visit http://www.amsatsa.org.za.

[ANS thanks AMSAT-SA for the above information]

New Satellite Launch Vehicle To Carry CubeSat Swarm in 2013

A report on the AMSAT-UK web says 2013 should see the first flight of a new satellite launch vehicle.
(See: http://www.uk.amsat.org/?p014)

Super Strypi, also known as SPARK (Space-borne Payload Assist Rocket - Kauai), has been developed by Sandia National Laboratories, the University of Hawaii and Aerojet. The rocket is based on an enlarged version of Sandia's Strypi sounding rocket.

The all solid fueled vehicle uses a GEM-46 (LEO-46) motor of Delta-2H heritage as first stage. A Orbus-7S (LEO-7) motor acts as second stage

and a Star-30BP (Spark-30) or an Orbus-1 (LEO-1) as third stage. It is spin and fin stabilized during fist stage burn and has attitude control for the two upper stages. The low cost rocket will be launched from a rail launcher and can put a payload of 250 kg into a 400 km

sun-synchronous orbit.

The Super Strypi vehicle will be launched from a rail-launcher at Barking Sands, Kauai (Pacific Missile Range Facility) towards the end of 2013.

Super Strypi will be carrying a swarm of CubeSats, the Edison Demonstration of Smallsat Networks (EDSN). The CubeSats are an unusual size of 10 by 10 by 15 cm (1.5U) and weigh 2 kg. The EDSN swarm will demonstrate distributed, multipoint space weather measurement and are expected to operate for at least 60 days and have an orbit life-time of up to 4 years.

ORS Project - Super Strypi
http://www.govsupport.us/ORSSSEA/Documents/DEA.pdf

Operationally Responsive Space (ORS) Project - Super Strypi
http://www.govsupport.us/orsssea/

Gunter's Space Page 2013 http://space.skyrocket.de/doc_chr/lau2013.htm

[ANS thanks AMSAT-UK for the above information]

UKube-1 Signs up for Launch and Completes Thermal Vacuum Testing

AMSAT-UK published a report that UKube-1, the UK Space Agency's (UKSA) first satellite, has 'booked' its journey into space on a Russian Soyuz-2 rocket. The launch from Baikonur in Kazakhstan is expected to take place in March 2013. UKube-1 has also completed Thermal Vacuum Testing to verify the spacecraft operation in a simulated space environment.

UKube-1 will carry a set of AMSAT-UK FUNcube boards to provide a 435/145 MHz linear transponder and a 145.915 MHz BPSK telemetry beacon for educational outreach.

Payloads in UKube-1 include: the first GPS device aimed at measuring plasmaspheric space weather; a camera that will take images of the Earth, and test the effect of radiation on space hardware, using a new generation of imaging sensor; an experiment to demonstrate the feasibility of using cosmic radiation to improve the security of communications satellites and to flight test lower cost electronic systems; an advanced mission interface computer to enable serious number crunching on tiny spacecraft; a high rate S-Band transmitter and patch antenna; a payload made up of 5 experiments that UK students and the public can interact with. There is also an outreach payload that allows school children to interact with the spacecraft.

Read the full story, including photos on the AMSAT-UK web:
http://www.uk.amsat.org/?p977

[ANS thanks the AMSAT-UK for the above information]

Dooms Day Press Release

N0D – Special Event Station for the End of the World
Successful OSCAR Satellite Operation!

Houston, Texas December 27, 2012: The N0D team had a very successful operation celebrating the Mayan Calendar End of the World which some expected would occur on Dec 21, 2012. In celebration, experienced satellite operators Allen Mattis, N5AFV, and Andy MacAllister, W5ACM, operated special event station N0D on the available satellite passes from December 15th, 2012, through December 22nd, 2012.

A total of 142 satellite contacts were made, and 29 US states, Canada, Mexico, Cuba, Puerto Rico and Brazil were worked. A total of 53 contacts were made on FM satellite SO-50. On the linear satellites AO-07, FO-29 and VO-52 a total of 89 contacts were made using both SSB and CW. It was especially nice to work Paulo, PV8DX, and Hector, CO6CBF, with CW. A contact was also made with Mexican special event station 4A0MAYA also celebrating the Mayan Calendar event. The N0D team thanks the OSCAR satellite community for their patience and understanding during occasional periods of congestion on the satellites related to the N0D operation.

As part of the special event, the South Texas Balloon Launch Team launched the Doomsday Balloon, BLT-32 “To the End of the World and
Float”, to prepare the world for its demise! The launch occurred at
2310 UTC on Saturday Dec 15th from Covey Trails Airport in Fulshear, Texas. BLT-32 was designed as a “floater” with hopes that it would
reach Europe. The balloon floated eastward for 450 miles and burst at an elevation of approximately 106,000 feet when the rising sun on the morning of Dec 16 th warmed the balloon causing the helium to expand. The balloon came down approximately 15 miles NNW of Pascagoula, MS and efforts have been successful to recover the instrument package.

N0D was also very active on the HF bands throughout the event and over 2,500 amateur radio contacts were made. All 50 US States and 54 DXCC countries were worked on the HF bands. N0D QSLs are available via KK5W (SASE required).

[ANS thanks Allen Mattis, N5AFV, for the above information]

Reminder -- AMSAT Receives $25,000 Matching Funds Challenge
This was announced in last week's ANS-258.

Now is the time to take advantage of this opportunity to double your donation.

There are several ways you can double your donation to keep Amateur Radio in Space:

- Members have received a form in the mail to fill out and return. Please do so today!

- Go the AMSAT Store and make a donation

- Donate via a PayPal donation sent to martha@amsat.org or click on our PayPal widget at http://www.amsat.org.

Your generous contribution to AMSAT to support AMSAT and Project Fox now will help ensure that our common dream of keeping amateur radio in space will, indeed, become a reality.

[ANS thanks the AMSAT Office for the above information]

Satellite Shorts From All Over

+ Listen for Wyatt, AC0RA operating mobile via satellites as he is on the road between Texas and Iowa this coming week.

+ Hudson Valley Satellite Nets
The next Hudson Valley Satellite Net, #156, will be Thursday January 3rd 2013 at 8PM EST On the KC2DAA Repeater 146.970 -600KHz 100 Hz PL Echolink: N2EYH-L Node Number 429079 (Echolink is only active for the duration of the net)
Subsequent nets for January will be held January 17th and 31st.
More information at: http://www.hvsatcom.org
(Stu, WA2BSS)

+ The SDR-Radio V2 software preview has been released. It includes support for FCD and FCR Pro+.
See: http://v2.sdr-radio.com/Previews.aspx

+ In Series Five Episode Twenty-Six of the ICQ Amateur / Ham Radio Podcasts Martin M1MRB reviews the Raspberry Pi for Amateur Radio.
http://tinyurl.com/ICQ-Podcasts-Pi

+ NASA has just released two free beautiful interactive ebooks, one about the discoveries of the Hubble Space Telescope, and another about the upcoming replacement for the Hubble, the James Webb Space Telescope. Each book features not just text, but galleries of images, videos, and interactive features that help explain the science and technology of each telescope. More details are at:
http://www.oneminuteastronomer.com/7184/free-nasa-ebook/

+ Lectures on CubeSat Technology and Applications that will be held at von Karman Institute (Brussels, Belgium) on 29 Jan - 1 Feb 2013. There will be close to 20 lectures given by the worldwide experts of the field.Participation is limited to 100 persons. Please register at:
https://www.vki.ac.be/index.php?option=com_mad4joomla&jid=1&Itemid356

+ Photos showing the arrival of NASA'S TDRS-K Satellite the Kennedy Space Center have been posted at:
http://www.americaspace.org/?p(778 TDRS-K is being prepared for a January launch atop a United Launch Alliance Atlas V rocket.

+ Photos of the Orion spacecraft crew cabin under construction at the Operations and Checkout Building (O & C) at the Kennedy Space Center are posted at: http://tinyurl.com/Orion-at-KSC (UniverseToday.com)

[ANS thanks the AMSAT-UK for the above information]

+ A multi-purpose portable satellite station
Ivo Klinkert PA1IVO describes his relatively simple setup to work amateur radio low-earth orbit satellites.
This is an expansion of his talk at the AMSAT-UK Colloquium that he re-wrote and had translated for the March 2012 AMSAT-DL Journal
Read Ivo's article at
http://ivok.home.xs4all.nl/pa1ivo/portable_satellite_setup.html

[ANS thanks Southgate ARC for the above information]

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In addition to regular membership, AMSAT offers membership in the President's Club. Members of the President's Club, as sustaining donors to AMSAT Project Funds, will be eligible to receive additional benefits. Application forms are available from the AMSAT Office.

Primary and secondary school students are eligible for membership at one-half the standard yearly rate. Post-secondary school students enrolled in at least half time status shall be eligible for the student rate for a maximum of 6 post-secondary years in this status. Contact Martha at the AMSAT Office for additional student membership information.

73,
This week's ANS Editor,
E.Mike McCardel, KC8YLD
kc8yld at amsat dot org

177. Weekly Highlights of Solar and Geomagnetic Activity, 24 - 30 December 2012

Newsgroup: rec.radio.amateur.space
Date: 2012-12-31 16:30:07 UTC
From: SWPC.Webmaster@noaa.gov
Message-ID: <20121231163001.81F1033C8C@panix2.panix.com>
Source record: 77
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.dx,rec.radio.amateur.space,rec.radio.shortwave,rec.radio.info

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:Product: Weekly Highlights and Forecasts
:Issued: 2012 Dec 31 1342 UTC
# Prepared by the US Dept. of Commerce, NOAA, Space Weather Prediction Center
# Product description and SWPC contact on the Web
# http://www.swpc.noaa.gov/weekly.html
#
# Weekly Highlights and Forecasts
#
Highlights of Solar and Geomagnetic Activity
24 - 30 December 2012

Solar activity was low. Region 1635 (N11, L=63, class/area=Dac/270
on 25 December) was the most active region this period, producing
twelve C-class flares. The largest of these was a C4/Sf at 1304 UTC
on 25 December. Although Region 1635 periodically exhibited
beta-gamma magnetic characteristics during its lifetime, it exited
the visible disk as a simple spotless plage region. Region 1633
(S07, L=113, class/area=Eai/100 on 24 December) produced a C1 at
2226 UTC on 24 December along with numerous low-level B-class flares
throughout the period. Region 1638 (N12, L=310, class/area=Hsx/150
on 29 December) produced a single C1/Sf flare at 1933 UTC on 29
December. A 10 degree filament erupted near N08E20 around 1939 UTC
on 27 December. While the bulk of the ejecta from this event was
directed north of the ecliptic, a weak impact is expected at earth
on 01 January.

No proton events were observed at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit was at
normal levels all week.

Geomagnetic field activity was quiet. Solar wind speed at the ACE
spacecraft ranged from around 250 km/s to around 350 km/s throughout
most of the period. There was a slight increase to about 490 km/s
towards the end of the week as the effects from a coronal hole high
speed stream (CH HSS) were felt for about a 24 hour period. They
have since settled back down to appproximately 400 km/s as the
effects of the CH HSS begin to wane. The interplanetary magnetic
field total field ranged from around 1 - 8 nT while the Bz component
ranged from around +5 nT to -5 nT.

Forecast of Solar and Geomagnetic Activity
31 December - 26 January 2013
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Solar activity is expected to be at low levels with a chance of isolated M-class flares throughout the period (31 December - 26 January).

No proton events are expected at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit is expected to be at background levels throughout the period.

Geomagnetic field activity is expected to be predominately quiet with a chance for unsettled conditions on 01-02, and 10 January with positive polarity coronal hole high speed streams.